

**THE RELATIONSHIP BETWEEN VERVE AND THE ACADEMIC
ACHIEVEMENT OF AFRICAN AMERICAN AND EUROPEAN
AMERICAN MIDDLE SCHOOL STUDENTS**

A Dissertation

by

TORRANCE N. HAWKINS

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

December 2005

Major Subject: Curriculum and Instruction

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ABSTRACT

The Relationship Between Verve and the Academic Achievement of African American and European American Middle School Students. (December 2005)

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The purpose of this study was to examine if verve had any impact on the academic achievement of African American middle school students. The three guiding questions of this research were:

1. Is there a significant difference in the verve levels between African American and European American students?
2. Is there a significant difference in verve levels of African American male and African American female students in middle school?
3. Is there a significant difference in the academic achievement of African American and European American students who possess high and low verve in the areas of reading and math?

A 24-item questionnaire was administered to 211 middle school students to determine if any verve levels were present, and if so, to what degree did the verve levels impact academic performance?

The findings were:

1. The verve levels were different between the African American and the European American students. The African American students in this study possessed higher amounts of verve.
2. The verve levels were different between the African American males and the African American females. The African American females in this study had higher amounts of verve than the African American males.
3. There was no relationship between the higher verve levels among the African American and European American students and their academic achievement in reading and math.

DEDICATION

This dissertation is dedicated to the many people who have helped make the improbable possible:

- To Champ and Renee, for always being in my corner and for always giving me good advice and somewhere to stay (smile).
- To Carol Jones, for always believing in me (we need good people like you).
- To Wendell Lee, for always allowing me to use your computer even when you had a bad class the same period.
- To Rollin and Jackie, for their unwavering support.
- To Dr. LaShaun Arzu, for the gift of my twin girls; you are a great mother and partner.
- To my mother, who is looking down and smiling.

ACKNOWLEDGEMENTS

To complete a dissertation is always a challenging process, and this was no exception. However, I have been blessed with the best committee. My heartfelt thanks go to Dr. Stephanie L. Knight and Dr. Kenneth Paprock for their mentoring, understanding, and overall help to finish this process. Thanks go to Dr. Patricia Larke for always bringing out the best in me and for always being there with her time, expertise, and understanding.

I would like to give my deepest thanks to Dr. Norvella P. Carter, the chair of my committee, whose support and encouragement and belief in me have been second to none. Without you, this would not be possible.

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CHAPTER I

INTRODUCTION

Background of the Study

There is a crisis in America's schools. African Americans are experiencing school failure nationwide (Achilles, Finn, & Gerber, 2000; Ferguson, 2001; Green, 2001; Lee, 2002). Given almost any measure used (IQ scores, SAT scores, college and high school grade point averages, graduation and/or dropout rates), African American students across the country do not achieve academically at the same rate as their European American counterparts (Achilles et al., 2000; Gordon, 1999; Green, 2001; Irvine & Armento, 2001; Jencks & Phillips, 1998; Kober, 2001; Lee, 2002). This academic achievement gap exists even when social economic status (SES), gender, and region are held constant (Achilles et al., 2000; Clark, 1983, 1988; Ferguson, 1997, 2001; Gordon, 1999; Green, 2001; Haycock, 2001; Jencks & Phillips, 1998; Kober, 2001; Lee, 2002; Singham, 1998). Tables 1.1 and 1.2 were taken from the National Assessment of Educational Progress (NAEP). On Table 1.2, the 17 year old European American students scored 295 on the reading portions, while 17 year old African American students only scored 266 on the same test. This is a 31-point difference in reading!

Looking at Table 1.2 in 1999, 17 year old European American students scored 313 in mathematics, while 17-year-old African American students only scored 286.

The style for this dissertation follows that of *The Journal of Educational Research*.

This is a 27-point difference. It is interesting to note that there is only a 44-point difference in the math scores of the nine-year-old European American students and 17-year-old African American students, which means that a fourth grade European American student is only trailing an African American high school senior by 44 points in mathematics proficiency. Something has to be done.

Table 1.1. Reading NAEP Scores

Subject and Year	European American			African American		
	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17
1971	214	261	291	170	222	239
1975	217	262	293	181	226	241
1980	221	264	293	189	233	243
1984	218	263	295	186	236	264
1988	218	261	295	189	243	274
1990	217	262	297	182	241	267
1992	218	266	297	185	238	261
1994	218	265	296	185	234	266
1996	220	266	295	191	234	266
1999	221	267	295	186	238	264

Table 1.2. Math NAEP Scores

Subject and Year	European American			African American		
	Age 9	Age 13	Age 17	Age 9	Age 13	Age 17
1973	225	274	310	190	228	270
1978	224	272	309	192	230	268
1982	224	274	304	195	240	272
1986	227	274	308	202	249	279
1990	235	276	309	208	249	289
1992	235	279	312	208	250	286
1994	237	281	312	212	252	286
1996	237	281	313	212	252	286
1999	239	283	315	211	251	283

The Achievement Gap

The reasons for the academic achievement gap between African American and European American students have been well studied (Achilles et al., 2000; Alexander, Entwisle, & Olson, 2001; Clark, 1983, 1988; Ferguson, 1997). While there is no clear consensus on the cause of this gap, several explanations exist. The earliest is the Deficit or Victim Blame Model, which presumes that performance deficiencies are to be found in the individual and the inadequacy of his or her prior life experiences (Banks & Banks, 2001; Nieto, 2000). This highly controversial model also alludes to the belief that African Americans are biologically or genetically inferior to European Americans (Singham, 1998). This model promotes the view that African Americans have overwhelming social problems that prevent learning and achievement from occurring at a normal rate. Scholars who embrace this model have a range of views that span from “extremely difficult” to “impossible” in terms of closing the achievement gap (Singham, 1998).

Contrary to this belief, African Americans have overcome various educational gaps throughout history such as The Literary Gap, The Elementary Gap, and The High School Completion Gap. They have accomplished these challenges by using proactive measures to reduce or eradicate the educational gaps. People in slavery overcame insurmountable odds and learned to read, cash poor African American communities banded together to build their own schools, and politically active African Americans challenged the Supreme Court to overturn the *Plessey v. Ferguson case* (separate but

equal) with the victory of *Brown v. The Board of Education*. However the macro and the micro systems still impact the academic achievement of students of color.

Macro System

The macro system is the overall function of schools in the United States. Some of the components have a great impact on student achievement such as funding, tracking, and quality textbooks. It has been an accepted standard that African American students, especially those in predominantly African American schools, receive far less funding than their European American counterparts (Anderson, 1988, 2004; McNeil, 2000). Today, the amount of school funding per pupil in several large public schools has decreased as the number of minority students in those schools has increased (McNeil, 2000).

Tracking is a process of sorting and dividing students into various academic categories that was designed to facilitate their placement in the classroom (i.e., groups for fast, average, and slow learners) (Murray & Fairchild, 1989). Educators have long believed that tracking promoted student learning. However, more and more research demonstrates the truly negative effects of tracking (Oakes, 1985). Student scores on IQ tests, achievement, ability, placement exams, and/or counselor and teacher selections are used to group or track students (Leacock, 1971; Murray & Fairchild, 1989; Oakes, 1985; Tobias, 1989).

Once students are tracked, peers, staff, teachers, and parents publicly identify them as high or low achievers. Students gain or lose status, privileges, and teacher preference as a result of the categorization into which they are placed. These groups or

categories rarely change. So once tracked, students often remain in the assigned ability group for his/her entire K-12 schooling process (Leacock, 1971; Murray & Fairchild, 1989).

Contemporary societies are more and more multicultural or multiethnic from the increased migration. In the last few decades, North America and Western Europe have become increasingly diverse. Such diversity is expressed in many ways, such as in social practices, ideologies, and discourses. Adequate textbooks of multicultural societies may be expected to reflect and promote the values of such multicultural societies. Unfortunately, much research in the last decades has shown that this is seldom the case. Most textbooks in the past and still many today, reflect the prejudices and stereotypes of the dominant European American culture (Gill, 1992; Mangan, 1993; Preiswerk, 1980; Troyna, 1993).

Micro System

Cultural Deficit/Cultural Difference Model

Another model that tried to explain the achievement gap was the cultural deprivation model (Singahm, 1998). This model suggests that the African American culture itself is “pathological” and causes African American students academic hardships in education. This model states that economic and social discrimination lead to self-perpetuating conditions that resulted in the development of dysfunctional personality traits, such as a low self-concept and a low need for achievement (Murray & Fairchild, 1989). Some researchers believe that African American parents failed their children in childrearing tasks, which in turn caused African American children not

to develop competencies necessary for school success (Lewis, 1970). To correct these deficits and enhance schools success, a number of compensatory educational programs were implemented (i.e., Head Start, Upward Bound, and Follow Through) (Lewis, 1970). These programs have had limited success in solving the problems of underachievement among African Americans (Lewis, 1970). The cultural deprivation model was harshly criticized during the 1970's by African American scholars, but it re-emerged as a legitimate explanation of African American school failure in the 1980's and 1990's because of the conservative political climate and the emphasis on topics such as the underclass and female-headed households (Lewis, 1970; Murray & Fairchild, 1989).

In the 1970's through the 1990's, critics of the genetic deficit and cultural deprivation theories argued that they promoted assimilation and violated the cultural integrity of African Americans (Banks, 1988). Critics of this model point out that the inclusion of African American culture in school is a key ingredient for African American success in education. These critics endorsed a cultural difference model (e.g., Banks, 1988; Cole & Bruner, 1972; Grubb & Dozier, 1989; Henderson & Washington, 1975; Lewis, 1970; Smith, 1986).

According to this model, African Americans have a rich African heritage and culture that is different from rather than inferior to that of European Americans. Proponents of this model believe that culture affects cognition, learning, attitude, behavior, and personality, and they conclude that African Americans have cognitive, learning, and motivational styles that are different from those emphasized in the school

culture (Boykin, 1983; Hale-Benson, 1986; Irvine, 2003). Research shows that a teacher's perception affects a student's performance (Banks, 1988). Teachers tend to hold negative views about African American cultural traits, and consequently, they perceive African American students as more difficult and less willing to put forth an effort to succeed academically. So teachers tend to be less supportive and attentive to African American students (Ferguson, 1997).

On the other hand, research shows that African American students seek to please their teachers more often than European American students. Hence, African American students are more likely to live (up or down) to their teachers' expectations than their European American counterparts. The result for African American children is often school failure (Ferguson, 1997). Teacher efficacy has to deal with the extent that teachers must believe they can actually teach children and make a difference in their lives (Bandura, 1997; Gibson & Dembo, 1984). According to Nieto (2000), many beginning teachers have been trained in the deficit model and have a low sense of efficacy in teaching underserved students.

The deficit model refers to the assumption that some students, because of genetic, culture, or experiential differences, are operating with a "deficit" and are inferior to other children.

Teachers in most cases have been trained to identify their students' weaknesses to develop an instructional plan. Often, teachers view students who live in poverty, come from homes with problems, and live in communities with social ills as possessing deficits that cannot be overcome in the classroom. (Carter, 2001, p. 64)

Verve

Boykin (1977, 1983, 2001) identified nine dimensions of African American culture that find their roots in West Africa. Boykin believes that these nine dimensions could impact African American students' achievement. These dimensions are spirituality, harmony, movement, affect, individual expressionism, communalism, social time perspective, oral tradition, and verve (Boykin & Cunningham, 2001). Spirituality is the idea that there is a divine power. Harmony is synonymous with being inclusive and that man is interrelated to all aspects of nature. Movement is a rhythmic orientation to life expressed by music or dance (Boykin, 1977, 1983, 2001). Affect is emotional expressiveness, the integration of feelings with thought or action such that, without an emotional connection, there is a lack of motivation (Foster, 1989). Communalism is another dimension often misinterpreted as a "gang mentality." It values the interdependence of people and being social as an orientation to the world. The success of the group is valued over the success of the individual.

Expressive individualism refers to a unique personality or a certain twist put on an individual's activity or behavior. It is an orientation to life as an "artistic endeavor" rather than a "scientific endeavor" (Hammond, 2000). Orality is also referred to as oral tradition. It is the transfer of information by word-of-mouth throughout generations of people. "Speaking is construed as a performance and not merely as a vehicle for interacting or communicating information" (Hammond, 2000). Social time perspective is a social construct that eliminates the rigidity of time in the context of social events among African American people. For example in traditional African culture, an event

begins when everyone arrives and ends when everyone goes home. African Americans' culture affects the way they approach academic tasks and the way they behave in traditional academic settings (Hale-Benson, 1986).

Verve implies a propensity for the energetic, the intense, the stimulating, and the lively. It connotes a tendency to attend to several concerns at once and to shift focus among them rather than to focus on a single concern or a series of concerns in a rigidly sequential fashion (Boykin, 1983).

According to Boykin (1977, 1983, 2001), African American children in school require verve. However, only a small body of research exists that has indicated there is a relationship between verve and increased academic achievement among students of color.

Learning Styles

Learning styles research focuses on how learners prefer to receive and process information and experiences, how they create concepts, and how they retain and retrieve information (Irvine & York, 2001). Commonalities in learning styles tend to exist within cultures (Anderson, 1988; Grant & Sleeter, 1989; Irvine, 1990, 1992; Ishii-Jordan & Peterson, 1994; Phillips, 1983; Ramirez & Castaneda, 1974; Reid, 1987; Willis, 1989).

Statement of the Problem

An academic achievement gap exists between African American and European American students. Verve seems to be one variable related to the academic achievement in African American students. Verve has not been well studied. Boykin

and Toms (1985) and Boykin and Mungai (1997) discovered that African American students scored remarkably better on academic tasks when they were taught using vernacular methods. There is a limited knowledge of vernacular in the field of education. It would seem that a greater understanding of vernacular is needed, which may help increase the academic achievement of African American students and positively affect the current achievement gap that exists.

This research increased the body of knowledge of vernacular's relationship to the academic achievement of African American students. It may also have an impact on reducing the academic achievement gap between African American and European American students.

Research Questions

1. Is there a significant difference in the vernacular levels between African American and European American students?
2. Is there a significant difference in vernacular levels of African American male and African American female students in middle school?
3. Is there a significant difference in the academic achievement of African American and European American students who possess high and low vernacular in the areas of reading and math?

Definition of Terms

The following definitions were used for the purpose of this study:

Academic Achievement: Refers to the TAKS scores in reading and math.

Academic Achievement Gap: The difference in academic success among European Americans and African Americans.

African Americans: People of color with African decent who currently live in America.

Child Activity Questionnaire (CAQ): A 24-item questionnaire used in this study.

Cultural Deprivation Model: The belief that African Americans are biologically or genetically inferior to European Americans (Singham, 1998).

Deficit or Victim Blame Model: Presumes that performance deficiencies are to be found in the individual and the inadequacy of his or her prior life experiences (Banks & Banks, 2001; Nieto, 2000).

Macro System: The overall function of schools in the United States. Some of the components have a great impact on student achievement such as funding, tracking, and quality textbooks.

Micro System: The internal system of the schools in the United States such as teacher perceptions and learning styles.

Socioeconomic Status (SES): Refers to the amount of income a household generates with consideration of the number of people living in the home.

Texas Assessment of Knowledge and Skills (TAKS) Test: The Texas state-mandated exam covering English language arts, math, science and social studies. It is designed to measure to what extent a student has learned, understood, and is able to apply the important concepts and skills expected at each tested grade level.

Teacher Efficacy: The extent to which teachers believe they can actually teach children and make a difference in their lives (Bandura, 1997; Gibson & Dembo, 1984).

Verve: The spirit and enthusiasm that animate artistic composition or performance. It is the propensity for the energetic, the intense, the stimulating, and the lively. A tendency to attend to several concerns at once and to shift focus among them rather than to focus on a single concern or a series of concerns in a rigidly sequential fashion as measured by the child Activity Questionnaire (Boykin, 1977).

Purpose of the Study

African American students are experiencing school failure at alarming rates, and consequently, an achievement gap exists between African American and European American students. The purpose of this research study was to expand the culture difference model by empirically investigating if verve impacted achievement in African American students. More specifically, this study examined if there was a significant difference in verve levels between African American and European American students and between African American males and African American females. It also determined if there was a significant difference in the academic achievement among students who possess high and low levels of verve. Knowing this information will enable educators, researchers, practitioners, and the lay community to develop programs, policies, and interventions that reduce or lower the achievement gap.

Significance of the Study

African American children, when compared to European American children of the same age, seem to be more responsive to a variety in teaching and learning formats and more intolerant of monotonous ones (Irvine, 2003). As a result, they soon learn their characteristic attitudes and way of behaving (i.e., movement, activity level, and energy) do not fit with what their teachers expect of them. They typically feel stifled and find it difficult to put their stylistic repertoires in the service of learning (Cole-Henderson, 2000). African American children can be expected to have a difficult time suppressing their movement style; however, in order to succeed in school, they must compromise their vibrancy (Hammond, 2000). Guttentag (1972) demonstrated the superiority of an instructional method that used the movements of lower class African American children in the learning of simple verbal concepts over the traditional method, which employed the latest advances, at that time, in perceptual teaching materials.

The achievement gap that exists between African American and European American children cannot simply be attributed to nature or nurture. Academic underachievement among African American children in comparison to European American children may be due to boring, unstimulating environments that are inadequate in allowing for stimulus change or for the expression of behavioral variability (Shade, 1990). Yet, verve's relationship to academic achievement has not been well documented. This research helped educators increase their knowledge of verve's impact on the academic achievement of African American students. This

research is valuable for educators because if educators acknowledged and understood the cultural aspects of African American children, then they could develop effective district, school, and classroom interventions to help reduce the achievement gap that currently exists.

Assumptions

The following assumptions were made:

1. Participants were representative of middle school students.
2. It was assumed that participants in this study responded honestly on the questionnaire.
3. The students participating in this study followed the established guidelines during the completion of questions in the survey.
4. The interpretation of the data collected accurately reflected the verve levels of eighth grade students.

Limitations

The following limitations were made:

1. A limitation in the study was the fact that only one school was used in the study.
2. Only students who volunteered participated in this study.
3. The sample in this study was limited to one region of Texas schools.

Summary

African American students across the country do not achieve academically at the same rate as their European American counterparts (Irvine & Armento, 2001). Why

is this? Years ago, researchers believed this was due to the Deficit or Victim Blame Model that presumes that deficiencies are within the individual. Others suggested that the achievement gap was due to cultural deficits, suggesting that the African American cultural itself is “pathological.” This research ascribes to the Cultural Difference Model that suggests that African Americans’ heritage and culture are different from rather than inferior to that of European Americans. The environment of traditional academic settings is in contrast with the psychological and behavioral styles of African Americans (Allen, 1988). The traditional western curriculum emphasizes regularity, environmental controls, and objectivity (Shade, 1990). If the traditional educational system does not change, African Americans will continue to encounter educational and social hardships.

Researchers such as Boykin and Toms (1985) suggest that African Americans respond to tasks holistically rather than individually, prefer inferential reasoning as opposed to deductive or inductive reasoning, approximate space and numbers rather than adhere to exactness or accuracy, focus on people rather than things, are more proficient in nonverbal than verbal communications, prefer kinesthetic/active activities, prefer evening rather than morning classes, choose social over nonsocial environments, and prefer “vervistic” learning experiences (Boykin & Toms, 1985, Hale-Benson, 1986; Irvine, 2002; Shade, 1983, 1989).

Organization of the Dissertation

The dissertation is divided into five major chapters. Chapter I provides an introduction, a statement of the problem, a purpose for study, research questions,

assumptions and limitations, a definition of terms, and a significance of the study.

Chapter II consists of the review of related literature. Chapter III explains the methodology and procedures followed in the study. Chapter IV analyzes the quantitative data. Chapter V contains a summary, recommendations, and implications for future research and conclusion.

CHAPTER II

LITERATURE REVIEW

Historical Concepts of the Achievement Gap

For the past 200 years, our nation has experienced the challenges of educating African American children. Historically, there have been educational gaps between the African American and European American populations. These historical gaps include the Literacy Gap, the Elementary School Attendance Gap, and the High School Completion Gap.

According to several researchers, the first educational gap that African Americans had to overcome was the Literacy Gap (Anderson, 1988, 2004; Dubois, 1939; Graff, 1979; Matthews, 1966; Smith, 1962). As early as the 17th century, virtually all European Americans in America were literate. Statistics stated that both European American males and females were approximately 90% literate. In contrast, approximately 90% of African Americans were illiterate (Anderson, 1988, 2004; Bullock, 1970; Graff, 1979).

In the 1700's, widespread educational efforts were taken to educate African Americans by the Society for the Propagation of the Gospel in Foreign Parts (Anderson, 1988, 2004; Bullock, 1970; Graff, 1979; Lockridge, 1974). They trained slaves in Christian principles and literacy. Its mission was training slaves in Christian principles and establishing schools for them (Anderson, 1988, 2004; Lockridge, 1974). One of the first schools was started in South Carolina's Goose Creek Parish (Anderson, 2004; Bremer, 1854; Dabney, 1936; DuBois, 1939). In 1743, another school was

opened for African American slaves, and by 1747, that school had graduated 40 African American scholars (Anderson, 1988, 2004; Jones, 1969; Matthews, 1966; Webber, 1978). African Americans in slavery had a strong ambition to read and write. As the number of African Americans learned to read and write, the spirit of discontent about their slave status increased. This dissatisfaction with slavery caused several insurrections against the slave institutions. As a result, many southern states adopted laws restricting the education of African Americans, which significantly impacted the literacy movement (Anderson, 1988, 2004; Jones, 1969; Matthews, 1966; Webber, 1978).

Despite laws against the education of African Americans, approximately 10% of them emerged from slavery literate. Educated African Americans soon became leaders in their community, and they lead campaigns to establish state-supported public education for all African Americans. During the same time period, the Civil Rights Voting Act of 1866 and the Fourteenth Amendment to the Constitution enabled African Americans to vote. Voting gave African Americans political leverage, and they used this political leverage to obtain funding for African American schools. During this time, African American schools received 40% of the states funding for education and this equity in state funding helped close the Literacy Gap (Anderson, 1988, 2004; Richings, 1900; Simmons, 1968). By the beginning of the 1900's, slightly more than half of southern African Americans claimed to be literate, which was a remarkable achievement, since only a generation earlier, the ex-slave population was more than 90% illiterate (Anderson, 1988, 2004; Matthews, 1966; Webber, 1978).

In the *Plessey v. Ferguson* case in 1896, the U.S. Supreme Court upheld an 1890 Louisiana statute mandating racially segregated but equal railroad carriages. The *Plessey v. Ferguson* case impacted the African American communities by implementing the “separate but equal” clause across the country. Consequently, gains that were made during the early years of the reconstruction area were soon diminished. African Americans suffered a decrease in the number of their children attending school that led to a gap between the races in elementary school attendance (Anderson, 2004; Lockridge, 1974; Matthews, 1966).

The Elementary School Attendance Gap existed because the European American South used its state power to halt the development of public school education for African American students. Their actions were so severe that they continued to affect the educational opportunities for African American students throughout the 20th century (Harlan, 1958; Jones, 1857; Lockridge, 1974; Matthews, 1966). Their tactics included discriminating against African Americans in the allocation of school funds between the races (Anderson, 1988, 2004; Lockridge, 1974; Matthews, 1966). Despite the fact that African Americans had already paid taxes for the public school system, the states refused to adequately fund public education for African American children (Anderson, 1988; Jones, 1857; Lockridge, 1974; Matthews, 1966). African American schools began receiving 11% of school funds when they were used to receiving 44% of school funds. European American politicians also wrote legislation that granted school boards the power to pay African American teachers \$25 a month and European American teachers, of the same level, \$55 dollars a month. As a

result of these actions, only 3 out of 10 African American students were enrolled in elementary school as compared to 6 out of 10 European American students in the early 1900's (Gutman, 1976; Jones, 1857; Lockridge, 1974; Matthews, 1966). Still determined to be educated, African Americans then turned their attention to closing The Elementary School Attendance Gap.

From 1914 through 1932, nearly 5000 Rosenwald schools were built to help educate African American elementary children. During this time, regular African American citizens raised over \$4,725,000 to help build these schools. Despite living and working in cash poor communities, African Americans banded together and raised money for their children. In the 1930's, when the Rosenwald campaign ended, 90% of African American children aged 5-14 were attending elementary school as compared to 91% of European American students attending elementary school (Anderson, 1988, 2004; Gutman, 1976; Lockridge, 1974; Matthews, 1966).

After closing the Elementary School Attendance Gap, another major problem facing African American children was access to secondary schools. Many European Americans who tolerated or supported elementary schools for African American students, viewed secondary schools as "just too much education for Blacks" (Anderson 1988, 2004). The road to equality for African Americans in terms of the high school completion gap was hard and demanding (Anderson, 1988). From 1904 to 1916, the number of secondary schools for European American students increased from 4 to 122, but this was not the case for African American students. For example, in 1916, Georgia had no secondary schools for African Americans, who made up 46% of the state's

school-aged population. Similarly, in 1916, Mississippi, South Carolina, Louisiana, and North Carolina had no four-year public high schools for African American children. By 1940, only 12% of African Americans aged 25 to 29 were high school graduates as compared to 41% of European Americans in the same age category (Anderson, 1988, 2004). By 1950, racial inequality in high school had deepened. African American ordinary citizens and community leaders recognized public secondary education as a means to equality and social justice and attaining equal opportunity at the secondary level compelled African Americans to challenge Jim Crow and other legal and customary forms of racial inequality (Anderson, 2004).

The major victory for African Americans came with the U.S. Supreme Court ruling in *Brown v. Board of Education* in 1954. The Supreme Court decision in this case made equal access to public education the law of the land. This court ruling emphasized the value of education and its potential as a tool for social and economic equality. As a result, enormous progress in ensuring equal access to a free public education for all children in the United States had been made (McNeil, 2000). With each decade, the population in school has included children from more diverse socio-cultural and economic backgrounds and diversified the kinds of educational programs offered.

Thus, after years of resistance, desegregation came suddenly to the south. The grassroots school reform movement of the 1960's spilled into the 1970's and paid dividends in terms of increased educational attainment at the secondary level. By 1970, 31% of African Americans, 25 years old and over, had graduated from high school, and

62% of 20-24 year old African Americans had graduated from high school. From 1987 to 1997, the gap in high school completion between African American and European American students in the 25-29 age groups narrowed to the point where there was no significant statistical difference. In the 25-29 year old category, the high school completion rate for African Americans more than quadrupled (i.e., from 21% to 86%) from 1960 to 1997. The huge high school completion gap that existed during the mid-20th century was virtually closed by the end of the century.

Even though the Literacy Gap, Elementary School Attendance Gap, and the High School Attendance and Completion Gaps have been identified and reduced, African Americans are still struggling to close the academic achievement gap.

The 1966 classical Coleman et al. report found that African American children scored on average one standard deviation (16 points) below European American children on several different standardized achievement tests such as IQ scores and SAT exams (Coleman et al., 1966). Although Coleman's report was written more than five decades ago, the achievement gap between African American and European American students still remains (Boehner, 2001; U.S. Department of Education, 2001; Haycock, 2001). The academic achievement gap has deleterious effects on African American students and the African American community. By the time African American students complete the fourth grade of school, they are two years behind their European American counterparts in reading and mathematics achievement. When African American students begin their eighth grade of school, they are at least 3 years behind, and by the time African American students reach the 12th grade of school, they are four

years behind their European American counterparts (Comer, 1988). The negative impact of the achievement gap can also be seen in the over-representation of African American students in special education classes or by the under-representation of African American students in the Gifted and Talented programs across the country or by the unequal discipline and suspensions of African American students by school administrators (Office of Civil Rights, 1993).

The etiology of the current academic achievement gap is still unknown; however, several factors such as funding, tracking, textbooks, teacher perceptions, and teacher efficacy have contributed to this gap (Gordon, 1999; Green, 2001; Haycock, 2001).

Macro-System

Funding

Funding is one of those components. During the African American literacy movement in the early 19th century, the inequalities in school funding were one of the key components that halted the literacy movement. Fairchild (1984) documented funding inequalities in public education within Los Angeles Unified School District. Fairchild correlated the school resource variables with the racial composition indicators and found that as the percentage of African American students and school size increased, per pupil expenditures decreased.

In contrast, as the percentage of European American students increased, expenditures increased and school size decreased. Moreover, Fairchild (1984) found that the resource variables per pupil expenditures and school size were significantly

related to academic achievement in reading and math scores. Fairchild's (1984) study suggests that the underachievement of African American school children was due, in part, to inequalities in the funding of educational systems.

For example, in the 1989-1990 school years, the poorest school district in Texas spent \$2,150 per student while the wealthiest districts spent \$14,514, or 6.75 times more, per student. New York's wealthiest district spent \$19,238 per student in 1989-1990; its poorest district spent only \$3,127 per student. In most states, two to five times more per student is spent in the wealthiest districts than in the poorest districts (Harp, 1992). According to one report, an average of \$5,200 per student was spent on education in large urban schools compared to \$6,073 per student in suburban schools. Rural schools districts also spent less per student (\$5,476) than suburban districts (Council of Great City Schools, 1992).

African American, Latino, Asian/Pacific American, and Native American students are disproportionately concentrated in the lowest spending schools. Their families, on average, own less wealth and have lower family income than European Americans (Taylor & Piche, 1991). Popular states with substantial minority concentrations show the greatest differences in per pupil expenditure between school districts. In all states, low-spending districts tend to have high concentrations of poor people, particularly poor people of color (Taylor & Piche, 1991).

Not surprisingly, the pattern of spending disparity parallels educational experience and school outcomes. African American, Latino, and Native American children, on average, achieve lower scores on standardized tests, drop out of school at

higher rates, and enroll in smaller numbers in post high school academic or vocational education programs. They are overrepresented in special-education programs, and low-ability/remedial basic skills tracks. They are more likely to experience early grade level failure and retention, and they are likely to be over age on entering high school. They are underrepresented in programs for the gifted and talented, in “high ability” and college preparatory tracks, and in advanced placement courses. Considerable evidence supports the proposition that spending differences translate into differences in educational quality (Espinosa & Ochoa, 1992).

A 1990 national assessment of 8th grade mathematics programs by the National Assessment of Educational Progress (NAEP) revealed a striking connection between students’ economic status and what is provided for them in their classrooms. While 84% of teachers in schools with economically middle or upper class students received all or most of the materials and resources they asked for, only 59% of teachers in schools with the largest percentage of poor students received only *some or none* of the instructional materials and resources they sought (Educational Testing Service, 1991). In addition, the students whose teachers reported an inadequacy of materials and resources achieved lower math scores than those teachers’ who reported that their materials and resources were adequate. On average, higher spending districts had smaller class sizes, higher paid, and more experienced teachers, while students in poor school districts were more likely to lack necessary instructional resources. Lower spending schools often provide inferior versions of the state’s “standard” educational program and curriculum.

This inequality occurs despite the agreement among educators that pre-school development programs, reading programs, reduced class size, teachers with experience are important for securing positive educational outcomes for poor and minority students. Table 2.1 reveals, that in 22 states, the highest poverty school districts received less per student funding from state and local sources than the lowest poverty school districts. Similarly, in 28 states, the school districts with the highest percentage of minority children received less funding than districts with the fewest minority children. This is also true of the nation as a whole.

Table 2.1. State Funding

States Where the Highest Minority School Districts Get Less Funding Than the Lowest Minority Districts	States Where the Highest Poverty School Districts Get Less Funding Than the Lowest Poverty Districts
Alabama	Alabama
Arizona	Arizona
Colorado	California
Illinois	Colorado
Iowa	Connecticut
Louisiana	Idaho
Maine	Illinois
Maryland	Iowa
Michigan	Kansas
Montana	Louisiana
New Hampshire	Maine
New York	Maryland
North Carolina	Montana
Ohio	Nebraska
Pennsylvania	New Hampshire
Rhode Island	New Mexico
South Carolina	New York
Texas	North Dakota
Vermont	Oklahoma
Virginia	Pennsylvania
West Virginia	South Carolina
Wisconsin	South Dakota
	Texas
	Utah
	Vermont
	Washington
	Wisconsin
	Wyoming

Tracking

African American students are more often placed in low ability groups or counseled into the vocational tracks rather than the college prep track (Murray & Fairchild, 1989; Patton, 1981; Tobias, 1989). This process is called tracking. In a comprehensive study of tracking, Oakes (1990) analyzed the relationship of race and tracking. She found that minority students, especially those in low socioeconomic groups, were disproportionately placed in low-track classes. Oakes also found that a small percentage of minority students were placed in high-track classes. Tracking seems to significantly impact academic achievement.

Rist (1970) studied the performance of African American children. He found that kindergarten tracking was based on social indicators including (a) pre-registration forms, (b) interviews with mothers, and (c) use of public assistance. Rist's study found that students were segregated by cleanliness of clothing, body odor, use of standard English, lighter skinned, and straighter hair. Tracking, from the beginning, has been implicated with racial, ethnic, and social class differences. Low tracks usually emphasize good behavior and menial skills. High tracks, on the other hand, offer preparation for college. Goodlad and Oakes (1988) found that if tracked, 1st or 2nd graders remained tracked for the duration of their K-12 educational career. Oakes (1985, 1990, 1992) also found that tracking was not in the best interest of students because it was unrelated to improving academic achievement or promoting positive attitudes about school. Tracking had particularly adverse effects on students already alienated by the school experience (i.e., poor, culturally/linguistically diverse).

Overall, tracking impacts academic achievement by (a) virtually charting the course of students' lives, (b) encouraging students to develop particular personalities and attitudes that remain constant, (c) using poor teaching methods (i.e., memorization, worksheets) for the lowest track students, and (d) reflecting perpetuating class, race, and gender inequalities in the American society (Oakes, 1985, 1992). In fact, because of the inequities in opportunity that it creates, tracking is a major contributor to the continuing achievement gap between the affluent and the disadvantaged and between the minorities and European Americans (Oakes, 1985, 1992).

Textbooks

Textbooks are known to be shaped by the dominant viewpoints of society. They are intended not only as means to realize the explicit curriculum of socially accepted knowledge, but also as the conduit for norms, values, and attitudes. It is, therefore, not surprising that textbooks also have been one of the main sources for the formulation of racist or Eurocentric ideas (Gill, 1992). Whereas such racism in the early 20th century and until the Second World War racism was quite explicit and formulated in terms of European American superiority, contemporary forms of racism in textbooks have become more subtle (Van Dijk, 1991). In one of his widely read book, author Loewen (1996) argues that American students have been lied to by the educational system in terms of the accuracy of history and the contributions that minorities have made in the United States.

According to Loewen (1996), the school curriculum includes books that stereotype, misinform, and degrade an African American identity. Also, the

contributions of African Americans in the history and literature and in the development of human civilization are rarely included in the curriculum (Comer, 1988; Tobias, 1989). Over 20 years ago, state and local school boards, school administrators, and teachers hid behind the excuse that materials and textbooks were unavailable to teach the African American experience (Tobias, 1989). Today, these books are available at bookstores and museums; yet, the school system rarely includes them in its curriculum (Comer, 1988; Lewis, 1970; Williams, 1981).

Micro System

Teacher Perceptions

In addition to funding, tracking, and textbooks, problems also arise in teacher perceptions of African American students (Entwisle & Alexander, 1988). It appears that teachers and counselors lower the academic and career expectations of many students of color. In 1986, the federal government, under the Youth Employment and Development Act, surveyed teenagers who had been tracked in less competitive tracks. Those teenagers expressed that they felt they were capable of a more challenging track; however, their counselors and teachers encouraged them to take easy credits, which they found impractical and uninteresting (Tobias, 1989).

Experimental studies confirm that teachers use “race” to form an impression of a student and his or her potential (Ferguson, 1997). Teachers have been found to have different expectations and perceptions for African American students than for European American students. These different expectations lead to different teacher behaviors that, in turn, reinforce lower performance among African American students

(Ferguson, 1997). A predominant impression or image of African American students, particularly African American males, is that they are tough, good at sports, and are good dancers (Blumenfield, 1992). African Americans are viewed as having their own dress, language, walk, and talk (Kunjufu, 1995). *Saggen*, or baggy pants, are examples of clothing considered to be part of the African American culture. *Struttin*, a way of walking, very often causes innumerable problems for African American students who exhibit that behavior in school (Kunjufu, 1995). People who are not familiar with *struttin* may recall the movie *Stir Crazy* where Richard Prior tried to teach Gene Wilder how to “walk bad.” According to Breinin, (1981) many teachers get annoyed, angry, and even furious when they see one of their African American male students *struttin* down the hall.

Departments of teacher education within colleges and universities train teachers to fail African American students by training them to view and respond to African Americans as culturally deprived individuals (Irvine, 1990, 1997, 2002, 2003). Teacher perceptions of and responses to African American students appear to influence their academic achievement. Many teachers view African Americans as uneducable and hold negative expectations for African American students, especially African American males (Allen, 1988; Murray & Fairchild, 1989). Partenio and Taylor (1985) found that teachers rate European American children higher than African American or Hispanic children on measures of classroom performance, motivation to learn, and potential for learning. In urban areas, many teachers spend more time on classroom management and behavioral conformity for African American students, but reinforce European

American children for academic performance (Shade & Edwards, 1987). Ross and Jackson (1991) found that teachers consistently held more negative expectancies for African American males and gave them lower ratings than African American females. Teachers had the lowest expectations for nonsubmissive, independent African American males (Ross & Jackson, 1991). Nogurea (1999) found that teacher attitudes influence teacher perceptions of students' and these perceptions affected teacher ratings, which were significantly related to academic achievement.

Teacher grades for African American children were found to be incongruent with their scores on standardized tests, indicating grades are subjective and are not necessarily reflective of students' abilities. Thus, it seems teachers of African American students hold negative perceptions and expectations about their academic abilities and future success that affect the grades they give and, consequently, African American students' academic achievement (Entwisle & Alexander, 1988; Murray & Fairchild, 1989).

In addition, the emotional reaction of teachers may be an important antecedent of children's perceived personal competence (Graham, 1988). Graham (1988) found that children were more likely to attribute failure to low ability when the teacher conveyed sympathy for failure and inferred lack of effort as the self-ascription than when the teacher displayed anger. Individuals expect failure to occur again when it is attributed to low ability (Graham, 1988). It would seem that African American children are more likely to be targets of sympathetic feedback from teachers since teachers are

trained to view them as uneducable. The negative consequences of this emotion are continued school failure (Graham, 1988).

Teacher Efficacy

The deficit model has an impact on teachers' expectations for students and more importantly, it influences the teachers' sense of efficacy about learning. Teacher efficacy is intricately tied to the teachers' belief system about students and the learning process. The deficit model paralyzes many teachers because they believe that circumstances in the student's life prevent learning. Teachers who believe that factors beyond their control cause student outcomes have low efficacy (Clark, 1983, 1988).

Some teachers believe that their own efforts make little difference and that the situational factors in the lives of students will cause success or failure in the classroom. If the situational factors are favorable, meaning the students come from a two-parent home, display middle-class values, and live in neighborhoods that reflect middle-class incomes or better, then success will follow. If situational factors are not favorable, that is, students come from one-parent families and live in poverty-stricken neighborhoods, then failure is inevitable. Ultimately, the teacher with low efficacy will not take responsibility for teaching all children (Clark, 1988).

It is imperative that teachers shed the deficit model and begin to embrace models that build on the strengths of the students and focus on high expectations for all. Teachers who possess a high sense of efficacy believe that effort, rather than factors outside the classroom, cause positive outcomes for students. The efficacious teacher believes that trying hard will bring success and that those teachers who do not

try hard will fail. They take full responsibility for teaching and learning in their classrooms (Nieto, 2000). Unfortunately, most teacher education programs continue to endorse the deficit model resulting in less efficacious teachers available to teach African American students and reinforcing the academic achievement gap that exists between African American and European American students (Irvine, 1990, 1997, 2002, 2003).

The deficit model, also called the genetic deficit or bad gene hypothesis, is the earliest explanation of low academic and intellectual functioning among African Americans. It concluded that African Americans were inferior to European Americans with respect to intellectual functioning and that African Americans had no culture (Murray & Fairchild, 1989). This traditional model posits that African American youth suffer from deficiencies that result in their poor performance. Despite how this model reinforced stereotypes that characterized African Americans as inferior (Murray & Fairchild, 1989), it remained the dominant view up to the 1960s when it was revised and renamed the cultural deprivation model.

Beginning in the 1960's, under the banner of cultural deprivation or disadvantage, a profusion of specific explanations appeared that were consistent with this traditional perspective. The cultural deprivation model shifted the blame for African American underachievement from their genes to their culture (Banks, 1988; Hare, 1987). Unlike the deficit model, this model recognized that African Americans had a culture; however, it considered African American culture to be pathological or a culture of poverty. Others have suggested deficits in the personality of African

Americans are due to “emotional scars” brought about by discrimination and poor living conditions, a mistrust of authority, self-depreciation, and lack of impulse control (Singham, 1998). The nature of the deficiencies is believed to be rooted in the inadequate socialization experiences of African American children. African American parents are said not to provide an appropriate intellectual atmosphere in the home or the kinds of toys, books, and so forth that promote intellectual growth (Singham, 1998). There is said to be a greater emphasis on obedience to arbitrarily designated rules, reliance on physical forms of discipline, and less parental warmth in the home (Singham, 1998).

All of these characteristics are assumed to be exacerbated by, or linked to a lack of structural integrity in the African American family, particularly in homes lacking a male head of the household (Murray & Fairchild, 1989). Outside the home, African American children are said regularly to fall prey to the influence of inappropriate role models and to become increasingly cynical and alienated by their life circumstances (Murray & Fairchild, 1989). According to Paulu (1987), school failure comes early to the inner city African American child and lays down a foundation for future failure and lack of interest in the classroom. Critics of the genetic deficit and cultural deprivation theories argued that they promoted assimilation, and they violated the cultural integrity of the African American community (Banks, 1988). These critics endorsed a cultural difference model (Banks, 1988; Boykin, 1983; Boykin & Toms, 1985; Grubb & Dozier, 1989).

According to the cultural difference model, the institutions (e.g., family, religion etc.), which enable the African American child to develop his/her sense of self and social orientation, have structures and functions often unique to the African American community (Grubb & Dozier, 1989). These characteristics, structures, and functions have their roots in West Africa (Hale-Benson, 1986). African Americans' cultural characteristics are evident in their cognitive and learning styles, their motivational styles, and in their language and communication styles (Banks & Banks, 2001; Hale-Benson, 1986). African American culture affects the way students approach academic tasks and the way they behave in traditional academic settings (Hale-Benson, 1986).

Supporters of the cultural difference model argue that the educational process has been insensitive to the cultural skill and styles of African American students. They argue that when African American children enter the school environment they arrive culturally different but are received as culturally deprived and treated as such (Boykin, 1977, 1983; Gay, 2000; Irvine, 1990; Ladson-Billings, 1994; Nieto, 2000). Researchers have not given much attention to how African American students respond to culturally similar environments. However, some researchers found that teachers who embrace the African American cultural style (i.e., cognitive, learning, motivational, and communication styles) in their classrooms are more effective with African American students (Boykin, 1977, 1983; Guttentag, 1972; Irvine, 1990, 1997, 2002, 2003).

Proponents of the cultural difference model believe that the educational process should be altered to accommodate these attributes. They conclude that an African

American heritage, culture, and learning style exist and that culture affects cognition, attitude, behavior, and personality. Although the deficit and cultural deprivation models have been heavily criticized by scholars for blaming African Americans for their school failure, it seems these models have remained the dominant paradigms inherent within the educational system because they provide a justification for current race, class, and gender inequalities (Nogurea, 1999). Blaming the victim promotes acceptance of educational inequality in America and rationalizes the failure of the schools (Murray & Fairchild, 1989). Cultural differences are ignored, and the general view is to see African American behavior as a distortion from the dominant culture and/or as pathological responses to the oppressive forces by the hegemonic society (Shade, 1990).

Learning Styles

Many researchers agree that African Americans' learning styles are congruent with field-dependent learning. Field dependent learners tend to: (a) respond to things in terms of the whole instead of isolated parts, (b) prefer inferential reasoning as opposed to deductive or inductive reasoning, (c) be more proficient in nonverbal than verbal communications, (d) focus on people rather than things, (e) prefer learning with variations and freedom of movement, (f) prefer kinesthetic/active instructional activities, (g) choose social over nonsocial cues, and (h) prefer "vervistic" learning experiences (Boykin & Toms, 1985). Hence, research reinforces that cultural differences, particularly differences among mainstream and diverse students' approaches to learning, are a major contributor to the school failure of African

American students (Irvine, 1990, 1997, 2002). Moreover research suggests that because African Americans are capable of learning and being successful in school, the achievement gap could be lowered if African Americans' approach to learning or their learning styles were better understood (Irvine, 2003).

Culture is a major, if not the primary factor, affecting the development of learning styles (Brodzinsky, 1985; Irvine, 1990; Shade & New, 1993). How learning styles develop depends on which ones have been modeled and reinforced by childbearing practices that commonly vary by culture (Anderson, 1988; Banks & Banks, 1993; Hale, 1982; Ishii-Jordan & Peterson, 1994; McIntyre, 1992; Owens, 1987; Phillips, 1983). Upon entering school, students attempt to gather and process incoming information through strategies that have been rewarded previously in the home or in the community (Anderson, 1988; Jenkins, 1982; Smith, 1993). However in class, if the students' culture is incongruent with the norms of the classroom, then poor academic performance and low self-esteem could result for students of color (Irvine, 1990, 1997, 2002, 2003).

Specifically, the African American learning style stems from a culture that is harmonious, expressive, musically inclined, and includes movement. One specific aspect of African American culture that seems to impact the academic achievement of students is verve (Boykin, 1977, 1983).

Verve

According to Boykin (1983), African Americans students have a need for a stimulating learning environment that allows opportunities for movement,

expressiveness, and group learning. Boykin calls this *verve*. Schools today reflect the culture of the European American middle class, which is devoid of any “*vervistic*” learning opportunities for African American students (Irvine, 2002). The current school culture encourages individual achievement orientation and promotes individual rather than group teaching (Morgan, 1990).

The school environment is authoritarian; teachers are active and students are passive (Shade, 1990). Teachers sit in front of the classroom and do most of the talking; students are expected to sit quietly in orderly rows and there is minimal interaction between teacher and student (Boykin, 1977, 1983; Morgan, 1990). The school culture is highly structured, demands conformity from students and teachers, and hinders any creativity (Boykin, 1983). Student activities include recitations, paper-and-pencil tasks, rote memory, and the verbatim reproduction of material. These performances seem indicative of an analytical cognitive style and not a *vervistic* or holistic learning environment.

Schools characterize cultural differences in students as intellectual and social deficiencies (Shade, 1990). Hence, African Americans have the skills to perform competently in school; however, their educational problems occur because of cultural differences (Grubb & Dozier, 1989; Hale-Benson, 1986; Smith, 1986). Cultural differences arise when an individual is faced with demands to perform in a manner inconsistent with his/her cultural experience (Shade, 1990).

According to researchers (Boykin, 1983; Hammond, 2000), African American cultural norms promote and encourage individual style and creativity, improvisation,

expression (verbal and nonverbal), and variation in completing a task. The school's behavioral expectations of dependency, docility, and submissiveness create conflict in the normal activity level and independence of many African American children, which is greater than the normal levels of European American children. This difference in activity levels often results in labels of hyperactivity because of different expectations of normal behavior (Hale-Benson, 1986).

Movement/Music

According to Shade (1990), African American students are more subjective learners and take on a more perceiving, holistic approach to learning. In a classic study by Marcia Guttentag (1972), she observed the activity of three and four year old preschool children whose parents were working class African American and middle class European Americans. The children were observed in a variety of somewhat artificially constrained free play situations. African American children displayed a more varied and more active movement style than either group of European American counterparts.

The European American children in both groups were more prone to engage in essentially stationary activities, such as sitting, squatting, and lying down. The African American children were more apt to engage in running, kicking, and jumping. About 7% of the activity of the African American children was devoted to dancing. Guttentag's (1972) results suggested that African American children bring to school a movement repertoire that is highly incongruent with the mainstream. By the time African American children enter school, they already have a well-developed set of

African American cultural styles, through which they interpret and process information from their own frame of reference (Shade, 1990). In another study, Morgan (1990) observed five different eighth-grade classes.

He found that African American students, particularly males, were five times more active than their European American counterparts. Furthermore, Della Valle (1984) found that only 25% of African American children in her study remain seated and passively involved with paper-and-pencil activities as consistent with school practices, while on the other hand, 75% of the African American students were out of their seats and moving around the classroom.

In addition, African American orality/expressiveness, such as playing the dozens, is often viewed negatively in school settings (Ferguson, 1997; Kunjufu, 1995). Playing the dozen is playful teasing among peers; however, it may be perceived as put-downs. African Americans use physical movement, various facial expressions, various vocal inflections, pitch, and tones (Boykin, 1983). For example, African American females tend to roll their eyes, move their necks, and place their hands on their hips when they feel strongly about a certain point of view (Boykin, 1983; Boykin & Toms, 1985). According to (Boykin, 1983), music is an extension of the African American culture, and African Americans tend to place the interconnectedness of movement and music in high regards. The African American community has viewed music and movement as vital to their individual and collective health. Allen and Boykin (1991) found that learning contexts that included music and the opportunity for movement significantly enhanced the learning of many African American children from low-

income backgrounds. Gilbert and Gay (1989) state that African American students function better in loosely structure cooperative environments in which the teacher and the students work together. Hale-Benson (1986) observed similar findings, indicating that physical and motor activities like dancing and hand clapping, contribute to the academic success of African American students.

Hence, it would appear that to be an effective teacher with African American students and to help lower the current academic achievement gap that exists between African American and European American students, teachers of African American students must be “*vervistic*” (Boykin, 1983; Foster, 1989). In other words, they need to use a style filled with rhythmic language, rapid intonation, and encouraging gestures with many instances of repetition, call and response, variation in pace, high emotional involvement, creative analogies, figurative language, catchy phrases, gestures, body movements, symbolism, and lively discussions with frequent and spontaneous student participation (Foster, 1989).

Irvine (2002) suggested that all children, regardless of race, would benefit from more active, *vervistic*, and stimulating classroom environment. Only a few studies have examined *vervistic* teaching styles, but little to no research has examined the impact of students’ *verve* levels on the current academic achievement gap. This present study empirically investigated this relationship to help identify variables to close the current academic achievement gap. It also added to the body of knowledge in the literature.

Summary of Literature Review

Past theories of the achievement gap between African American and European American students have been inadequate in explaining the large gap in achievement. An assumption of these theories is that African American students can be academically successful if they alter their learning styles to be compatible with the school environment. This assumption blames African Americans for the existing achievement gap and ignores how successful African American students would likely be if teachers included African American culture into their current teaching strategies. Research suggests that African American students learn best through physical movements, personal teacher-student relationships, cooperative groups, and oral communication. Boykin (1983) refers to this learning style as psychological/ behavioral verve. This research examined the impact verve has on the academic achievement of African American students.

CHAPTER III

METHODOLOGY

Introduction

The school in this study is a 4-A school district with approximately 7700 students. It is located in the southern part of Texas, an incorporated area situated on the Houston Ship Channel approximately 15 miles east of downtown Houston. The community has a “small town” atmosphere and is comprised of mostly blue-collar families who care about the welfare of their children and each other.

The school district is experiencing tremendous student growth. Nearly all the present campuses are at capacity. Currently, the district is building a new primary school with other new campuses in the developing stages, which are a new junior high and a new ninth grade center. Special programs are available to all students through accelerated programs, special education, bilingual education, English as a Second Language, vocational education, gifted and talented education, and advanced placement and honors programs.

The school district has a rich history of being actively engaged in the future of their community with the school district being established in 1937. At that time, the district only employed eight teachers. Today, the district employs approximately 905 teachers. The employees are committed to making certain that each child in this school district receives the best education possible.

Population

The students were chosen from an urban school district that encompasses 21 square miles in east Harris County. The district currently has one high school (9-12), one junior high (7-8), one middle school (5-6), two elementary schools (3-4), three primary schools (K-2), and one alternative educational center. The 2004-2005 total enrollments are approximately 7020 students. The high school has a total enrollment of 1931 students. The ethnic breakdown includes 1% Native American, 16% Asian or Pacific Islander, 19.6% African Americans, 45.1% Hispanic American, and 33.8% European American.

The junior high had a total enrollment of 1345 students. The ethnic breakdown includes 2% Native American, 1.8% Asian or Pacific Islander, 19% African Americans, 50.1% Hispanic, and 30% European American. The middle school has a total enrollment of 1297 students. The ethnic breakdown includes 1.4 % Asian or Pacific Islander, 16.5 % African Americans, 55.4% Hispanic Americans, and 26.8% European Americans.

The primary schools (i.e., two elementary, three primary, one alternative, and one pre-K) have a total enrollment of 3292. The ethnic breakdown includes .04% Native American, 1.2% Asian or Pacific Islander, 13.4% African Americans, 51.4% Hispanic American, and 34.1% European Americans. The Social Economic Status (SES) of the school district as determined by the number of students on free or reduced lunch is 67%. The school district is an unincorporated community of 29,000 residents. The school district is bordered on the east by the San Jacinto River, on the south by the

Houston Ship Channel, on the west by Beltway 8, and on the north by Wallisville Road.

Description of the Sample

The sample consisted of 211 European American and African American 8th grade students between the ages of 13 and 14. The study included 104 European Americans and 107 African Americans. Out of the 104 European Americans who participated in the study, 59 were male and 45 were female. Of the 107 African Americans who participated in the study, 60 were male and 47 were female.

The setting of the school in terms of the 2003-2004 TAKS scores are as following:

- For the mathematics section, 44.1% of the 254 females met the math standard, and 3.1% of the females received commended performance.
- 46% of the 261 male students met the math standard, and 6.5 % of the male students received commended performance.
- 32% of the 93 African American students met the math standard, and 1.1 of the African American students received commended performance.
- 54.1% of the 135 European American students met the math standard, and 8.1% of the European American students received commended performance (see Table 3.1).

Table 3.1. Math 2003 TAKS Test

Mathematics	Met Standard	Commended Performance
254 Females	44.1%	3.1%
261 Males	46.0%	6.5%
93 African Americans	32%	1.1%
135 European Americans	54.1%	8.1%

For the reading section on the 2003-2004 TAKS test:

- 82.7% of the 254 females met the reading standard, and 11.8% of all females received commended performance.
- 78.5% of the 256 male students met the reading standard, and 9.8% of the male students received commended performance.
- 86.8 % of the 91 African American students met the reading standard, and 9.9% of the African American students received commended performance.
- 85.0% of the 133 European American students met the reading standard, and 23.3% of the European American students received commended performance on the exam (see Table 3.2).

Table 3.2. Reading 2003 TAKS Test

Reading	Met Standard	Commended Performance
254 Females	82.7%	11.8%
256 Males	78.5%	9.8%
91 African Americans	86.8%	9.9%
133 European Americans	85.0%	23.3%

A TAKS score of 1986 was the minimum passing score to have met the standard on the 2003-2004 TAKS exam. A TAKS score of 2400 was the minimum passing score to have commended performance on the 2003-2004 TAKS test.

The extracurricular activates at the school to help increase TAKS scores are: Double block math classes are for all students who did not pass the TAKS test the previous year. Morning tutorial helps students with various subjects before school begins. Extended day is a program where students stay after school and receive snacks as well as academic help in all classes. Saturday school is a three to four week enrichment program in which students receive additional test curriculum preparatory. The SES of the school in this study as determined by the number of students on free or reduced lunch was 67%.

Design of the Study

This design used a correlation non-experimental design. Non-experimental designs are generally referred to as correlational designs or cross-sectional designs. The correlation design is the research design employed in the social sciences. Correlational

studies examine the relationship between two or more variables at a single point in time. Data were collected on both the independent and dependent variables from the same time period in order to determine if there is a relationship (Spector, 1981).

For example, if someone wanted to find out whether SAT scores determine success in college (measured by college GPA), one could use a correlational design. Correlational studies are useful in trying to establish relationships between certain individual characteristics, e.g., education, income, race, age, gender, etc., and some observed behavior, such as political participation, political issues, and the like. Correlational designs are relatively easy and inexpensive to carry out. The limitation of the correlation design is that they are very weak in terms of establishing causality. The most that one can say is that the relationship is weak, moderate, or strong, and whether it is positive or negative (Spector, 1981).

The student TAKS scores and verve level served as dependent variables while the students' gender and ethnicity served as the independent variables. In an experiment, the independent variable is the variable that is varied or manipulated by the researcher, and the dependent variable is the response that is measured. An independent variable is the presumed cause, whereas the dependent variable is the presumed effect. The independent variable is the antecedent, and the dependent variable is the consequent. In experiments, the independent variable is controlled and manipulated by the experimenter; while the dependent variable is not manipulated, instead the dependent variable is observed or measured for variation as a presumed result of the variation in the independent variable (Spector, 1981).

Instruments

Child Activity Questionnaire (CAQ)

The instruments used in this study were a Child Activity Questionnaire (CAQ) and archival data from the students' TAKS scores. The Child Activity Questionnaire was a paper-and-pencil survey that measured the verve levels of student. The first four questions on the CAQ included background information of the students (i.e., age, ethnicity, gender, and household income levels). Items 5-18 on the CAQ assessed the student perception of her/his own movement expressiveness and orientation (Boykin & Mungai, 1997). This instrument was revised to include a greater number of movement expressive activities that better convey the three movement qualities: movement, talking, and music. This questionnaire was developed and tested by Dr. Wade A. Boykin (Boykin & Mungai, 1997).

The survey contained questions such as, "How often do you prefer your body to move?" "Do you move your body a lot when you talk?" and "Does music that you enjoy put you in a good mood?" The scale's 14 items were rated along an interval scaled five-point Likert scale, with 1 indicating "Almost Never" and 5 indicating "Almost Always." The overall score is the verve level, which is the mean of the responses on items 5-18 on the CAQ.

The reliability coefficient, alpha of the CAQ that was designed by Boykin (Boykin & Mungai, 1997) is 0.85. The validity was obtained when Dr. Wade Boykin ran a correlation study between the Child Activity Questionnaire and the Home Movement Expressive Questionnaire (which is the parent instrument for child activity

questionnaire). The correlation between the two studies was 0.68. Since the correlation was high, the CAQ was positive, meaning that construct validity was obtained for the CAQ. The alpha coefficient for the home movement expressive questionnaire was 0.74. The sample size of both questionnaires was 93 African American students. A questionnaire to measure verve was chosen because it is standardized, objective, and consistent (i.e., everyone gets the same stimulus), and easy to administer (Kazdin, 1980).

Item Analysis for the CAQ

The item analysis for the CAQ was based on the three movement qualities: movement, talking, and music. In Table 3.3, four out of the 14 questions or 28% of the questionnaire were about movement. In Table 3.4, two out of the 14 questions or 14% of the survey dealt with talking. In Table 3.5, eight out of the 14 questions or 57% of the survey dealt with the qualities of music. The first four questions on the CAQ gathered background information; therefore, they were not included in the item analysis.

Table 3.3. Movement

Question #	Question
#5	How often do you prefer for your body to be moving?
#10	How often do you feel that one should not sit still when he or she is listening to music?
#12	How often are there many ways that you move your body?
#13	How often do you move while watching TV?

Table 3.4. Talking

Question #	Question
#8	How often do you move your body when you talk?
#18	How often do you move your hands and body when you speak?

Table 3.5. Music

Question #	Question
#6	How often do you feel that a party must have music or it's not really a party?
#7	How often do you need music in your life?
#9	How often does good music put you in a good mood?
#11	How often are drum beats essential for enjoyable music?
#14	How often do you feel happier when music is on?
#15	How often do you like to clap and tap your feet when music is on?
#16	How often do you have to dance when you listen to music?

TAKS Test

Changes in state law required the implementation of a new criterion-referenced program (Fan, 1993). The TAAS shifted the focus from minimum skills to academic skills, which represented a more comprehensive assessment of the state-mandated

curriculum, the Essential Elements. TAAS assessed higher-order skills and problem-solving math, reading and writing for grades 3, 5, 7, 9, and 11 exit levels. However in 1995, science and social studies were added to the eighth grade TAAS test. Due to the nature of criterion-referenced testing, TAAS tests are based on instructional content areas, which have been clearly defined, and as such, TAAS test score validity is totally content-based. To attain a high level of content validity, committees consisting of education experts in subject areas as well as experts in test development are formed to develop and/or review test objectives, instructional targets, test specifications, item review and selections, and other relevant test development activities (Fan, 1993).

As criterion-referenced tests, the items in reading and mathematics are selected into their respective item pools primarily based on how well items match the specified instructional objectives to be assessed (Fan, 1993). While the emphasis of item selection for TAAS tests is not on item-total correlation, point-biserial correlations for individual items are available for the test development committee, which consists of education experts in subject areas, educators with different ethnic backgrounds and with experience in multicultural issues, as well as testing specialists (Fan, 1993). In 1999, development of the Texas Assessment of Knowledge and Skills began (TAKS).

The legislature passed bills ending social promotion and created a more rigorous testing program. As mandated by the 76th Texas Legislature, The Texas Education Agency began to develop a new assessment program, the TAKS, to be aligned with the state-mandated curriculum, the Texas Essential Knowledge and Skills. Under the new law, students in grades 3 (reading), 5 and 8 (math and reading) will be

required to demonstrate proficiency on a state assessment test and achieve passing grades in order to advance to the next grade level.

By the 11th grade (reading, writing, math, science, and social studies), student must pass the TAKS test, in addition to receiving the required number of credits, in order to receive their high school diploma. Every TAKS test is directly linked to the Texas Essential Knowledge and Skills (TEKS) curriculum. The TEKS is the state-mandated curriculum for Texas public school students. Essential knowledge and skills taught at each grade build upon the material learned in previous grades. By developing the academic skills specified in the TEKS, students can build a strong foundation for future success.

Procedures

Recruitment

The proposal was presented to the Institutional Review Board of Texas A&M University for survey questionnaire approval prior to data collection. The superintendent of the Channelview Independent School District was contacted for the district approval to conduct the research. Next, the principal of the junior high school within the Channelview area was contacted by telephone. The purpose of the study was explained to her and after the principal agreed that her school could be used. Then, a summary of the research proposal was sent to her and she was asked to identify teachers who would be willing to participate in the study. The entire 8th grade science department decided to participate in the study, and the survey would be administrated by the 8th grade science teachers in the science classrooms.

Next, a meeting was scheduled with the science teachers to discuss the purpose and rationale of the study, after which they were given the parental consent forms to give to their students.

The parental consent form outlined the nature of the study and the confidentiality of the participant's data. Parental consent forms informed parents of their child's selection to participate in a research project. Parents who gave consent for their child to participate in the study, signed and returned the consent form to their child's science teacher. Arrangements were made with the science teachers to give students, who did not participate in the study, an alternate assignment to do while the students participating in the study were working on the questionnaire. Their science teacher gave student assent forms to the students prior to the administration of the survey instrument.

Testing Conditions

Their science teacher at the school tested the students in their science classroom. A brown envelope was prepared for each student. The envelope contained the consent form and the Child Activity Questionnaire. The classroom science teacher distributed the brown envelopes to the students. Once all the students received an envelope, the teacher asked the participants to take out the consent form.

The teacher read the Subject Consent Form (Appendix C) and the following general introduction out loud:

The purpose of the questionnaire is to learn more about school achievement in junior high students. What I am most interested in are your opinions, attitudes, and feelings. Your answers to the questions will be kept confidential; that is, they will not be provided to your parents, or school officials. There is no right

or wrong answer; therefore, you should respond freely. There are no risks or discomforts expected, except for the time it takes to fill out the questionnaire.

All students were given the same questionnaire. All members of the classroom were given the opportunity to be tested, regardless of ethnicity, age, or gender. Only the data from the African American and European American subjects were used to test the hypotheses.

At the end of the testing session, the subjects were asked to put their consent forms and questionnaire back in the envelope and then to give the envelopes to the administrator (science teacher). The subjects were then asked not to discuss the questionnaire until all of their classmates in the school, who were participating in the study, had been tested. The teacher then answered any questions that were asked by the students.

Data Analysis

The nominal data in this study were gender and ethnicity and the interval data were *verve* and TAKS scores. The data in this study were analyzed using statistical significance tests and effect sizes; t-tests of independent means assess whether the means of two independent groups are equal (Shavelson, 1988). This study involved two independent groups (i.e., high and low *verve*).

A significance test is performed to determine if an observed value of a statistic differs enough from a hypothesized value of a parameter to draw the inference that the observed sample is significant statistically from the population. A significance test consists of calculating the probability of obtaining a statistic as different or more different from the null hypotheses (given that the null hypothesis is correct) than the

statistic obtained in the sample (Lipsey & Wilson, 1993). If this probability is sufficiently low, then the difference between the parameter and the statistic is said to be statistically significant.

In significance testing as in hypothesis testing, researchers must decide whether they want to conduct their tests in a one-tailed fashion or in a two-tailed fashion. This decision has an important bearing on a subsequent step in both forms of inferential testing. If a researcher fails to state explicitly which of these options was selected, it is a fairly safe bet that a two-tailed test was conducted.

Effect Size

The concept of Null Hypothesis Significance Testing (NHST) was introduced by Fisher (1925) after which there have been several arguments for and against its use (Abelson, 1997; Anderson, Burnham, & Thompson, 2000; Carver, 1978; Cohen, 1990, 1994; Cortina & Dunlap, 1997; Falk & Greenbaum, 1995; Guttman, 1985; Huberty & Pike, 1999; Thompson, 2002a). Statistical significance examines whether the results of the research are due to chance or sampling variability (Kirk, 1996; Thompson, 2002a) while practical significance is concerned with the importance of the study in the real world. In his 1996 article, Kirk states that:

In scientific inference, what we want to know is the probability that the null hypothesis is true given that we have obtained a set of data. What null hypothesis significance testing tells us is the probability of obtaining these data or more extreme data if the null hypothesis is true. (p. 747)

According to Kirk (1996), a researcher turns the continuum of probability into a reject-do-not-reject decision in NHST. In addition to this, Rosnow and Rosenthal (1989) state that fixation of researchers on p-value of 0.05 has been widely criticized.

Apart from these issues, the fact that null hypothesis significance testing is sensitive with respect to larger sample sizes makes it even less useful (Bakan, 1966; Craig, Eison, & Metze, 1976; Lykken, 1968; Nunnally, 1960; Rozeboom, 1960; Thompson, 1994).

Carver (1978) states that null hypothesis significance testing does not give a researcher the likelihood of replication of the same research. In fact, Nix and Barnette (1998) stated that the p-value does not give us information about the magnitude of significance or the probability of the replication of the research.

Because the null hypothesis significance testing has many shortcomings, many researchers recommend using the effect sizes along with the p-values (Elmore & Rotou, 2001; Fern & Monroe, 1996; Huberty, 2002; Kirk, 1996; Olejnik & Algina, 2000; Snyder & Lawson, 1993; Thompson, 1996, 1998, 2002a, 2002b).

In 1999, Wilson and the Task Force on Statistical Inference emphasized that effect sizes (e.g., Cohen's d , omega, η^2) should "always" be reported along with p values, and that "reporting and interpreting effect sizes in the context of previously reported effects is essential to good research" (p. 599, emphasis added).

The effect size (ES) is a name given to a family of indices that measure the magnitude of a treatment effect. Unlike significance tests, these indices are independent of sample size. ES measures are the common currency of meta-analysis studies that summarize the findings from a specific area of research (Lipsey & Wilson, 1993). According to Cohen (1977), effect size is "the degree to which the phenomenon is present in the population" or "the degree to which the null hypothesis is false... The

larger this value, the greater the degree to which the phenomenon under the study is manifested” (pp. 9-10). Cohen (1988, 1994) also states that effect size can also be defined as the degree to which the sample results differ from the null hypothesis. Statistical significance tests have severe limits, so with that in mind, effect sizes are used as an alternative to or supplement for statistical significance test (Cohen, 1994; Meehl, 1978, Schmidt, 1996, Thompson, 1996). Numerous articles explain the different effect size choices (Cortina & Nouri, 2000; Kirk, 1996; Kline, 2004; Olenjik & Algina, 2000).

The report of Wilkinson and the Task Force on Statistical Inference (1999) in the *American Psychologist* stated that with respect to replication and stability of research findings, “reporting and interpreting effect sizes in the context of previously reported effects is essential to good research. It enables the readers to evaluate the stability of results across samples, designs and analyses” (p. 599).

Research Questions

Research Question 1

The mean of the verge level of African American students is statistically significantly different from the mean of the verge level of European American students. Statistically stating,

$$H_{10}: \mu_a - \mu_e = 0$$

$$H_{1r}: \mu_a - \mu_e > 0$$

Research Question 2

The nerve levels of African American males and African American females are statistically significantly different. Statistically stating,

$$H_{20}: \mu_{am} - \mu_{af} = 0$$

$$H_{2r}: \mu_{am} - \mu_{af} \neq 0$$

Research Question 3a

The nerve levels of students had a statistically significant influence on the students' academic achievement measured by TAKS scores. Statistically stating,

$$H_{3-a0}: \mu_{\text{high nerve-r}} - \mu_{\text{low nerve-r}} = 0$$

$$H_{3-ar}: \mu_{\text{high nerve-r}} - \mu_{\text{low nerve-r}} \neq 0$$

Research Question 3b

$$H_{3-b0}: \mu_{\text{high nerve-m}} - \mu_{\text{low nerve-m}} = 0$$

$$H_{3-br}: \mu_{\text{high nerve-m}} - \mu_{\text{low nerve-m}} \neq 0$$

Caveat: The mean scores of the respondents on the items 5-18 were used to determine high and low nerve. A mean score of 3.0 or higher on the CAQ indicated high nerve level and a mean score lesser than 3.0 on the CAQ indicated low nerve level.

CHAPTER IV

RESULTS

The statistical methods of this study are discussed. Three hypotheses were examined and analyzed using t-tests.

Reliability of the Data Collected

Reliability refers to the accuracy of measurement by a test. Any direct measurement of such consistency calls for a comparison between at least two measurements. The two measurements may be obtained by retesting an individual with the identical test. Aside from practical limitations, retesting is not a theoretically desirable method of determining a reliability coefficient if, as usual, the items that constitute the test are only one of many sets that might equally have been used to measure the particular ability or trait (Isaac & Michaels, 1995).

The reliability coefficient calculated for this study was Cronbach's Alpha. Since the TAKS Reading and Math scores did not belong to the same scale as the rest of the CAQ questionnaire (which was measured on a Likert scale), only the items measured on the CAQ were used to calculate Cronbach's Alpha. The reliability analysis for this study produced a Cronbach's Alpha of 75% and a Cronbach's Alpha Based on Standardized Items of 75.1% (see Table 4.1). The scores on the Cronbach's Alpha and the Cronbach's Standardized Item indicated that the scores of this study have relatively low reliability. Cronbach's Alpha was calculated for TAKS math and TAKS reading scores and it was found to be 67.6%, which is quite low (see Table 4.2). But this may be due to the fact that only two items were considered in the calculation of

Cronbach's alpha in this case and more items tend to increase Cronbach's Alpha (Isaac & Michaels, 1995).

Table 4.1. Reliability Statistics for Items on the CAQ

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.750	.751	14

Table 4.2. Reliability Statistics for TAKS Math and TAKS Reading Scores

Cronbach's Alpha	N of Items
.676	2

This study used 14 independent variables, which are reported in Table 4.3. The variables on Table 4.3 are:

1. How often do you prefer your body to be moving?
2. Do you feel that a party must have music to be a party?
3. Do you need music in your life?
4. Do you move your body a lot when you talk?
5. Does good music put you in a good mood?
6. Do you sit still when you are listening to music?
7. Are drumbeats essential for good music?
8. Are there different ways that you move your body?
9. While watching TV, do you move your body?
10. Do you feel happier when music is playing?
11. When listening to music, do you like to clap your hands?
12. Do you enjoy dancing to music?
13. Do you prefer to sing to music or just sit and listen?
14. How often do you use your hands and body to speak?

Table 4.3. Correlation Matrix for the 14 Independent Verve Variables on the CAQ

	bodmov	partymus	Musiclif	bodytalk	musc mood	sitstill	drumbeat	waysmove	TV	happymus	claptap	dance	sing	speak
bodmov	1.000	.107	.267	.222	.158	.181	.106	.150	.144	.137	.192	.213	.178	.077
partymus	.107	1.000	.176	.111	.225	.091	.167	.175	-.078	.168	.183	.289	.211	.186
musiclif	.267	.176	1.000	.133	.376	.150	.224	.156	.015	.276	.119	.205	.222	.132
bodytalk	.222	.111	.133	1.000	.026	.171	.124	.107	.215	.084	.221	.209	.193	.406
musc mood	.158	.225	.376	.026	1.000	.225	.187	.148	.187	.477	.168	.112	.152	.117
sitstill	.181	.091	.150	.171	.225	1.000	.129	.155	.137	.141	.222	.201	.204	.208
drumbeat	.106	.167	.224	.124	.187	.129	1.000	.162	.036	.217	.269	.198	.101	.108
waysmove	.150	.175	.156	.107	.148	.155	.162	1.000	-.032	.240	.154	.304	.185	.272
TV	.144	-.078	.015	.215	.187	.137	.036	-.032	1.000	.093	.151	-.008	-.045	.047
happymus	.137	.168	.276	.084	.477	.141	.217	.240	.093	1.000	.178	.160	.156	.183
claptap	.192	.183	.119	.221	.168	.222	.269	.154	.151	.178	1.000	.405	.254	.212
dance	.213	.289	.205	.209	.112	.201	.198	.304	-.008	.160	.405	1.000	.466	.370
sing	.178	.211	.222	.193	.152	.204	.101	.185	-.045	.156	.254	.466	1.000	.310
speak	.077	.186	.132	.406	.117	.208	.108	.272	.047	.183	.212	.370	.310	1.000

Note. The covariance matrix is calculated and used in the analysis.

Data Analysis

Research Question 1

The aim of this research question was to determine if there was a statistically significant difference in the verve levels between African American and European American students. The Child Activity Questionnaire (CAQ) scale compared the verve levels between 108 African American students and 103 European American students. The mean of the 14 independent variables measuring verve, such as how often they prefer their body to be moving, importance of music in their life, etc., indicated the verve of the students.

Adding the total number of responses from the CAQ and then dividing that number by 14 calculated verve. The average of 3.0 or > indicates high verve while a average of < 3.0 indicates low verve. A t-test comprising of ethnicity as the independent variable and verve as the dependent variable was conducted at 95% confidence level (see Table 4.4). The results revealed that the African American students had a statistically, significantly higher mean verve level than European American students. ($\mu_a = 3.6$ vs. $\mu_e = 3.3$) (see Table 4.5). This difference was statistically significant with $t(221) = 2.83, p < .01$. Therefore the null hypothesis, *African American students and European American students have the same verve level* was rejected.

This research question is statistically significant and important as well, because it shows that African American students have statistically significant higher verve levels than their European American counterparts. In the current educational system,

classrooms across the country are not adequately prepared to service students with high amounts of verve. Having higher verve levels among African American students could be a key element to the large number of African American students receiving classroom referrals, school suspensions, or it could be a factor to the larger number of African American students being tested and placed into special education classes.

Table 4.4. Independent Samples Test

		Levine's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	T	Df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Verve	Equal variances assumed	.408	.524	-3.600	209	<.05	-.27989	.07775	-.43316	-.12662
	Equal variances not assumed			-3.605	208.219	<.05	-.27989	.07765	-.47	-.12681

Table 4.5. t-test for African American vs. European American Students

	Ethnicity	N	Mean	Std. Deviation	Std. Error Mean
Verve	White	104	3.3743	.53835	.05279
	African American	107	3.6542	.58903	.05694

In a study of urban school districts, African American children received more office referrals and subsequently more suspensions than any other ethnic group (Skiba,

Peterson, & Williams, 1997). In regards to special education in 1998, approximately 1.5 million minority children were identified as having mental retardation, emotional disturbance, or specific learning disability. More than 876,000 of these were African American or Native American, and African American students were nearly three times as likely as European American students to be labeled “mentally retarded.”

The U.S. Department of Education (2000) showed that in 13 states more than 2.75% of all African Americans students enrolled were labeled mentally retarded. The prevalence of mental retardation for European American nationally was approximately 0.75% in 2001, and in no state did the incidence among European American ever rise above 2.32%. Moreover, nearly three-quarters of the states with unusually high incidence rates (2.75%-5.41%) for African Americans were in the south.

Measures of the Distance or Group Difference Indices

According to Huberty (2002), standardized mean difference is the typical effect size index that is used in a two-group mean comparison situation. Jacob Cohen proposed an effect size index, “d,” to measure standardized difference (Cohen, 1962). The difference between the population mean standardized and the standard deviation is the measure of difference. Huberty (2002) stated that there were many discussions in the 1970s and 1980s about which standard deviation should be used in the equation.

Cohen defined “d” as the difference between the means, $\mu_1 - \mu_2$, divided by the standard deviation, σ , of either group. Cohen argued that the standard deviation of either group could be used when the variances of the two groups are homogeneous. Formula for Cohen’s “d” (Cohen, 1988) is as follows:

$$D = (\mu_1 - \mu_2) / \sigma_{\text{pooled}}$$

According to Cohen (1988), effect sizes can be defined as “small, $d=.2$,” “medium, $d=.5$,” and “large, $d=.8$,” stating that “there is a certain risk in inherent in offering conventional operational definitions for those terms for use in power analysis in as diverse a field of inquiry as behavioral science” (p. 25).

Cohen’s (1988) hesitancy in presenting criteria for effect noteworthiness stemmed from the important admonition that the noteworthiness of an effect turns largely on what one is studying. Smaller but replicable effects for very important outcomes may be very noteworthy; extremely large effects may be needed for results to be noteworthy for relatively unimportant outcomes.

For example, Gage (1978) noted that

Even though the relationship between cigarette smoking and lung cancer is relatively small, sometimes even very weak relationships can be important.... [O]n the basis of such correlations, important public health policy has been made and millions of people have changed strong habits. (p. 21)

Thompson (2002a) noted that “if people interpreted effect sizes [using fixed benchmarks] with the same rigidity that has been used in statistical testing, we would merely be being stupid in another metric” (pp. 82-83).

The calculations for the effect size estimate are shown in Tables 4.6 and 4.7. The African American students scored an average of 3.7 points out of a possible 5 points on the CAQ. The European American students scored 3.3 points out of a possible 5 points on the CAQ. The Cohen’s d calculated for this hypothesis was 48.21%, which is close to 50%. This can be considered a reasonably medium effect size. It goes to prove that the statistical significance did not occur due to high sample

size but rather due to the existence of a really statistically significant difference between the means of African American and European American students.

Table 4.6. Descriptive Statistics for Verve

	N	Mean	Std. Deviation
Verve	211	3.5162	.58048
Valid N (listwise)	211		

Table 4.7. Calculation of Cohen's d for Hypothesis 1

Mean Verve African American Students	Mean Verve of European American Students	$\mu_a - \mu_e$	$(\mu_a - \mu_e) / \sigma_{\text{pooledverve}}$	Cohen's d Effect size
3.6542	3.3743	3.6542-3.3743	$\frac{3.6542-3.3743}{0.58048}$	48.21%

Research Question 2

The aim of Research Question 2 was to determine if African American males have the same verve levels as African American females. The CAQ scale compared the verve levels of 64 African American females and 50 African American males. A t-test was conducted at 95% confidence level with gender as the independent variable and verve level as the dependent variable. The mean verve scores of African American

females were higher than the mean verve scores of African American males. ($\mu_{af}= 3.9$ vs. $\mu_{am}=3.4$). This difference was statistically significant with $t(108) = 2.83$, $p < .01$ (see Table 4.8 and Table 4.9). Therefore, the null hypothesis, *African American males and African American females have the same verve level* was rejected.

Table 4.8. t-test for African American Males vs. African American Females (Group Statistics)

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Verve	Male	66	3.4881	.60500	.07447
	Female	41	3.9216	.45367	.07085

Table 4.9. Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
Verve	Equal variances assumed	1.693	.196	-3.948	105	<.001	-.43351	.10982	Lower -.65126	Upper -.21576
	Equal variances not assumed			-4.217	101.195	.000	-.43351	.10279	Lower -.63741	Upper -.22960

Effect Size

Cohen's d was calculated for this research question to quantify the amount of difference between the two groups, namely African American females and African American males in terms of their verve level. The effect size was calculated to be 73.59% (see Table 4.10), which can be considered quite high (close to 75%). This shows that the null hypothesis was not rejected due to the influence of high sample size. It was rejected due to the existence of a really statistically significant difference between the means of African American males and African American females.

Table 4.10. Calculation of Cohen's d for Hypothesis 2

Mean Verve of African American Females	Mean Verve of African American Males	$\mu_{aaf} - \mu_{aam}$	$(\mu_{aaf} - \mu_{aam}) /$ $\sigma_{pooledverve}$	(Cohen's d) Effect size
3.9216	3.4881	3.9216-3.4881	$\frac{3.9216-3.4881}{.58903}$.7359

The Office for Civil Rights (1993) reported that while African Americans males composed 8.23% of the total student population, they received corporal punishment and were suspended at rates over three times their percentage in the population. In a study of the educational status of 25,000 eighth graders from the National Education Longitudinal Study of 1988, Davis and Jordan (1994) found that suspensions were imposed upon African American males much more than any other group. Garibaldi (1992) reported that while African American males composed 43% of the school age

population in a New Orleans district, they received 65% of the school district's suspensions and 80% of the expulsions.

Research Question 3

The aim of Research Question 3 was to determine if there was a statistically significant difference between the academic achievement of students with verve and their reading and math TAKS scores. In order to do this, the researcher felt it necessary to run a regression analysis for research question 3. According to Huck (2000), there are three different types of regression: (a) logistic regression (b) multiple regression, and (c) bivariate regression.

From the beginning, logistic regression was only used by researchers in the medical field. However, more recently, those who conduct empirical investigation in other fields of study have used logistic regression. Logistic regression deals with relationships among variables with one variable being the dependent, while the other(s) is/are the independent variable(s). Next, the independent variables can be continuous or categorical in nature, and last the purpose of logistic regression can be either prediction or explanation.

Multiple regressions involve just one "y" variable but two, three, or more "x" variables. Secondly, multiple regressions can be done in different ways, which can lead to different results. Bivariate regression is similar to bivariate correlation, because both are designed for situations in which there are just two variables. However, bivariate regression can be either prediction or explanation, and it is used mostly frequently to see how well scores on the dependent variable can be predicted from data on the

independent variable (Huck, 2000). For this research study, the researcher used the bivariate regression form.

The TAKS scores of the students who participated in this study could have been influenced by any number variables other than verve levels. In order to isolate verve and the academic achievement of the students in the study, the researcher could have (a) used the students prior TAKS scores or (b) the researcher could have used some other form of student achievement such as grade point average or class rank. Since the researcher could not access the students' prior TAKS scores or grade point averages, then the researcher ran a regression correlation with TAKS math as the independent variable and TAKS reading as the dependent variable.

The researcher decided to run a regression correlation in order to control the verve levels and the academic achievement of students in the study. The researcher noticed that the TAKS reading and math sections are correlated, which means that if the students excelled on the reading portion of the TAKS exam, then there is a strong possibility that the students would excel on the math portion of the TAKS exam as well. Table 4.11 explains that 28.8% of the dependent variable is explained by the independent variable, or that 28.8% of TAKS reading scores are affected by the TAKS math scores.

Table 4.11. Model Summary

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.536	.288	.284	149.425

Table 4.12 further uncovers that when the researcher regressed the TAKS math on the TAKS reading, the explained part or the error free part was 1813069.8 and the unexplained part or the error part was 4487875.0. So, because the significance in Table 4.12 was .000, which is $< .05$, then the researcher could say that when the TAKS math was regressed on the TAKS reading, this was statistically significant and correlated.

Table 4.12. ANOVA^b for Regression

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1813070	1	1813069.849	81.203	.000 ^a
	Residual	4487875	201	22327.736		
	Total	6300945	202			

^aPredictors: (Constant), taksm

^bDependent Variable: taksr

Next, the researcher calculated and computed \hat{y} (Table 4.13 and Table 4.14) to eliminate the error part. After \hat{y} was calculated, the researcher ran another regression in which the researcher regressed \hat{y} on \hat{y} . \hat{y} served as the

independent variable and yhat served as the dependent variable. The results were that R Square was .001 or 1% of Yhat (see Table 4.15). If R is $>.05$, then verve is not a good predictor of the students' success on the math and reading portions of the TAKS exams. Since R is .034, which is greater than .05, then the researcher could say that verve did not impact the students TAKS reading and math scores (see Table 4.15).

Table 4.13. Calculate Yhat

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
1 (Constant)	631.427	166.203	.536	3.799	.000
taksm	.734	.081		9.011	.000

Table 4.14. Computing Yhat

Computing Yhat		Calculating Yhat
Compute yhat	=	$631.247 + (.734 * \text{taksm})$
Compute e	=	$\text{taksr} - \text{yhat}$
Correlations variables	=	yhat e

Table 4.15. Model Summary

Model	R	R Square	Adjusted R Square	Std Error of the Estimate
1	.034 ^a	.001	-.004	69.36531025

^aPredictors: (Constant), verve.

Table 4.16 further uncovers that the significant results were .632. The significant results are also important because any number that is greater than .05 means that regression was not statically significant and not correlated. Table 4.17 calculates R squared into a T statistic or an F statistic.

Table 4.16. ANOVA^b Results for Yhat

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1,107.591	1	1,107.591	.230	.632 ^a
Residual	967,120.800	201	4,811.546		
Total	968,228.4	202			

^aPredictors: (Constant, verve).

^bDependent Variable: yhat.

Table 4.17. Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2,050.504	30.012		68.322	.000
verve	-4.028	8.395	0.034	-.480	.632

^aDependent Variable: yhat.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

Historically, the United States has experienced challenges in educating African American children. Several achievement gaps have existed between African American and European American students, but have been overcome by educators' overtime. The first gap was the Literacy Gap. This gap was overcome by the creation of schools in the 18th and 19th centuries after the Emancipation Proclamation (Anderson, 2004). The next gap was the Elementary School Attendance Gap. In 1900, only 36% of African American children were enrolled in elementary school, while 55% of European American children attended elementary school (Anderson, 2004). This gap was overcome by the creation of the Rosenwald schools, which was funded by voluntary contributions from poor, African American citizens and private philanthropy (Anderson, 2004).

In the 1930's, African Americans turned their attention to the High School Completion Gap because one of the major problems facing African Americans was access to high schools (Franklin, 1992). The U.S. Supreme Court ruling in *Brown v. Board of Education* in 1954 represented the symbolic end to Jim Crow schooling and sparked the grassroots campaign for educational equality for all levels. The school reform movements continued from the 1960's through the 1990's and resulted in increased educational attainment for African Americans at the secondary level. Hence, the historical gaps have been significantly reduced, yet another gap exists between

African Americans and European Americans. It is the Academic Achievement Gap. Even when social, economic status, gender, and region are held constant, African American students, nationwide, do not achieve academically at the same rates as their European American counterparts (Irvine & Armento, 2001; Shade, 1990; Singham, 1998).

The reasons for the Academic Achievement Gap between African American and European American students have been well studied, but there is not a clear consensus on its cause. For example, models of academic achievement have stated that African Americans underachieve in school because they have a culture that is not supportive of school (i.e., the deficit model), or a culture that is pathological (culture deprivation model), or a culture that differs from the school culture (i.e., the cultural difference model). The deficit and cultural deprivation models assume that being African Americans in America is a reason that can account for low academic achievement in African Americans.

All models are proponents that culture affects cognition, attitude, behavior, and personality. However, the cultural difference model states that African American culture positively influences African American achievement (Boykin, 1983; Hale-Benson, 1986; Irvine, 2003). One aspect of African American culture that has emerged in the literature as a possible factor is verve. Verve can simply be defined as the spirit and enthusiasm that animate artistic composition or performance. It is the propensity for the energetic, the intense, the stimulating, and the lively. A tendency to attend to several concerns at once and to shift focus among them rather than to focus on a single

concern or a series of concerns in a rigidly sequential fashion as measured by the Child Activity Questionnaire (CAQ) (Boykin, 1977).

According to Boykin, verve can positively affect student learning if they have an active, stimulating, and highly arousing learning environment that offers a variety of information at a constantly changing pace. African American students have little tolerance for quiet, passive, monotonous settings. Guttentag's (1972) study of African American and European American preschool children suggested that African American children bring to school a movement repertoire that is highly incongruent with the mainstream educational system. Does verve impact academic achievement? Is there a difference between students with high and low verve levels? This incongruity could be one of the major factors that hinder the academic achievement in African American students.

Research Questions

1. Is there a significant difference in the verve levels between African American and European American students?
2. Is there a significant difference in verve levels of African American male and African American female's students in middle school?
3. Is there a significant difference in the academic achievement of African American and European American students who possess high and low verve in the areas of reading and math?

Discussion

Three research questions guided the study. First, this study empirically investigated if there was a significant difference in verve levels between African American and European American students. Secondly, this study examined if there was a significant difference in the verve levels between African American males and African American females. Lastly, this study examined if verve significantly impacted achievement between African American and European American students in the areas of reading and math.

In Research Question 1, the Child Activity Questionnaire (CAQ) scale compared the verve levels between 108 African American students and 103 European American students. The results revealed that African American students had statistically significant higher verve levels than their European American counterparts.

Verve and movement are interconnected in the African American culture (Boykin, 1983). Movement, in particular, has been an integral part of the African American experience in the United States. Stylized movements have been a characteristic of African American development. African American students bring this movement (i.e., verve) into the school environment (Boykin, 1983).

In the classroom, high levels of verve may look like excessive talking, students asking other students for help, students regularly asking assistance from the teacher, or students trying to work on more than one assignment at a time. Verve may take the form of (a) a loud noisy working environment; (b) students preferring group work

rather than individual work; (c) joking, teasing, and playing while doing class work; and (d) preferring hands-on, interactive learning instead of paper-and-pencil tasks.

These behaviors are in contrast to the traditional American educational system (Boykin, 1983). Generally, in the traditional American educational setting, teachers are active and move around the classroom while the students are expected to sit quietly and work on paper-and-pencil tasks. Also, in the traditional system, students are encouraged to stay in their assigned areas and to work individually (Boykin, 1983).

Hence, the school culture is incongruent with students who exhibit high levels of verve. As a result, African American students with high verve levels may feel stifled, have a difficult time suppressing their movement style, and find it difficult to achieve academically in traditional school settings (Cole-Henderson, 2000). It would seem that if African Americans, who have high levels of verve, cannot compromise on their vibrancy, then school failure is eminent. Academic underachievement in African American children may be due to unstimulating environments that are inadequate in allowing for stimulus change or for the expression of behavioral variability (Shade, 1990). Students who fall into this quandary are likely to have higher office referrals, school suspensions, and more referrals to special education classrooms (Skiba et al., 1997). They are also more likely to be associated with having learning problems, emotional disturbance, and psychiatric disorders such as Attention Deficit Hyperactivity Disorder and disruptive behavior disorders.

According to Boykin (1983), African Americans need an active, stimulating learning environment. Morgan (1990) found that African American students,

particularly males, were five times more active than European American children. In another study, Della Valle (1984) found that only 25% of African American children studied remain seated and passively involved as consistent with school practices.

Guttentag (1972) demonstrated the superiority of an instructional method that used the movements of lower class African American children in the learning of simple verbal concepts over the traditional method. The African American children in that study did better academically using the instructional methods that included movement than their European American counterparts.

In Research Question 2, this study examined if there was a significant difference in the verve levels between African American males and African American females. The CAQ scale compared the verve levels of 64 African American females to 50 African American males. There was a statistically significant difference in the verve levels of African American males compared to African American females. African American females scored higher on the CAQ than African American males.

African American females also scored higher on the CAQ than any other group in the survey, which included European American males, European American females, and African American males. Furthermore, females, regardless of race, scored higher on the CAQ than males. Interestingly, the preponderance of studies shows males as more physical, active, and outgoing (Turner, 1994). However, in the classroom, females are more verbal, social, and active (Turner, 1994).

Those results may have occurred because when compared to males, females tend to be more verbal, talkative, and have more physical contact in the classroom.

These results may have also occurred because, in the last 25 years, the images and roles of females have changed in American society. Women have entered into more traditional male dominated areas (Turner, 1994).

For example, there are more households where females earn equal to or more income than their male counterparts, more female headed households, more females heading corporations and educational institutions, more females in male-dominated sports such as football, basketball, boxing and wrestling, and more female superheroes in movies and television shows. It would seem that because females have taken on more traditional male roles and are involved in more male-dominated activities, this might contribute to females having higher *verve*. African American females, in particular, may have more *verve* than any other group because African Americans are a culture group that is matriarchal. African American females share egalitarian roles with their male counterparts within the home and society (Alexander, 1981; Gutman, 1976; Thomas & Neal, 1978).

In other words, African American females are encouraged to take on leadership roles within the home, and this is promoted within the culture of the African American family. Even though African American females have higher *verve* levels than their African American male counterparts, African American females tend to do better than African American males in school. African American females have higher rates of high school completion, college attendance, and college graduation rates (Turner, 1994). American society views assertiveness as a positive trait to possess for male and females (Spence & Helmreich, 1972). In the educational setting, it would seem that if African

American females with high nerve levels are perceived to be assertive, then school personnel would perceive the high nerve levels of African American females as a positive characteristic. A teacher's perception influences teacher efficacy, which in turn influences academic achievement (Irvine, 2002; Nogurea, 1999).

Hence, teachers would have high teacher efficacy or invest in African American female students whom they perceive to be positive or assertive, and those females would experience academic success. On the other hand, African American males with high nerve levels are likely to be perceived as "hostile, angry, and acting out." Ross and Jackson (1991) found that teachers consistently held more negative expectancies for African American males and gave them lower ratings than African American females and that teachers had the lowest expectations for nervous males. Hence, teachers teaching African American males with high nerve would have lower expectation, lower teacher efficacy, and would spend more time on behavior conformity, and those males would experience academic failure.

And lastly, in Research Question 3, this study examined if nerve significantly impacted academic achievement between African American and European American students in the areas of reading and math. There was no significant difference in the TAKS reading scores between students with high nerve and students with low nerve. The students with the higher nerve levels scored better on the reading section of the TAKS tests than students with lower nerve levels. In fact, the African American students scored better than their European American classmates on the TAKS reading test. On the other hand, there was a significant difference in the TAKS math scores

between students with high and low verve levels. Students with higher verve levels scored lower marks on the TAKS math test than students with lower verve levels. African Americans students may have scored higher on the reading section of the TAKS test than their European American counterparts because reading is an ideal discipline for students with high verve. The dynamics of reading include: listening, talking, dialogue, interaction, discussion, and creativity. Students with higher verve levels may find that they are actively participating in the reading and learning process. Reading is a very creative discipline that allows students with high verve levels to use a multi-sensory approach in the process of helping themselves learn.

Unlike reading, math is an exact science (Moses, 1994). This study revealed that students who possess high levels of verve scored lower on the math section of the 2003-2004 TAKS tests than students with lower verve scores. Math may be a very abstract, concrete, and unstimulating discipline for students with high verve. Math classrooms across the country tend to be taught with rote paper-and-pencil tasks (Moses, 1994). So students with lower verve levels or students who need less stimulation may likely do better in math than highly active students. The results of this study suggest that other successful strategies are needed to teach math to students with high verve levels.

Conclusions

In Research Question 1, according to the research, students with high levels of verve impact teachers negatively (Boykin, 1983). Many times, teachers are not properly educated on how to handle students who possess high amounts of verve

(Boykin, 1983). Hence, students who are constantly talking, moving, and touching in the classroom, are likely to be seen as “troublemakers,” and the teacher may be more prone to seek disciplinary action. In addition, teachers may make a mental note that “those students” do not really want to learn the subject matter, subconsciously “tune out” or divert important instructional time from those students to other students, who display lesser amounts of verve in the classroom. If educators were trained to recognize, identify, and implement successful strategies for students with verve, then the educational system would be one step closer to closing the current Academic Achievement Gap.

Therefore, college and universities’ teacher education programs need to implement some type of training program to recognize and identify verve and other cultural aspects of minority students. Furthermore teachers, who are already working in the field of education, should receive professional development hours in attending workshops that recognize and identify the components of verve.

In Research Question 2, one of the reasons gender may have an effect on academic achievement is because of the difference in how African American males and females are perceived in the school setting. Teachers seem to hold more negative attitudes toward and more negative expectations for African American males than for African American females (Ross & Jackson, 1991). African American females are perceived more positively and seem to confront a less hostile environment than African American males (Alexander, 1981).

So, if teachers believe that they can teach vervistic African American females, they will teach them. If they do not believe that they can effectively teach vervistic African American males, then they are not likely to put forth a great effort in trying to teach them African American males.

In Research Question 3, non-minority teachers are likely to mistake cultural differences in African American children as cognitive or behavioral disabilities. The current academic achievement gap is just one example of the mistaken cultural norms. African American students need an educational environment that is in harmony with their educational and cultural tenants. This harmony can be achieved by infusing culturally responsive pedagogy into the mainstream of the United States K-12 educational system, especially in the area of math.

Recommendations

For the first research question, a strong body of research has indicated that the teachers' perceptions of culture-related identities in the classroom are relevant to school achievement by students (Gay, 2000; Irvine & Armento, 2001; Ladson-Billings, 1994, 1995). Culturally responsive teaching enables students to be better human beings and more successful learners. Students must believe they can succeed in learning tasks and have motivation to persevere. Teachers must demonstrate ambitious and appropriate expectations and exhibit support for students in their efforts toward academic achievement. This can be done through providing resources and personal assistance, celebrating individual and collective accomplishments, and through implementing culturally responsive teaching (Gay, 2000).

Ladson-Billings (1992) explains that culturally responsive teachers develop intellectual, social, emotional, and political learning by “using cultural referents to impart knowledge, and skills, and attitudes” (p. 382). In essence, culturally responsive teachers teach the whole child (Gay, 2000). Hollins (1996) adds that education designed specifically for students of color incorporates “culturally mediated cognition, culturally appropriate social situations for learning, and culturally valued knowledge in curriculum content” (p. 13).

Culturally responsive teachers realize not only the importance of academic achievement, but also the maintaining of cultural identity and heritage (Gay, 2000). Ladson-Billings (1994) studied actual elementary classrooms and observed the above-mentioned values demonstrated. She saw that when students were part of a collective effort designed to encourage academic and cultural excellence, expectations were clearly expressed, skills taught, and interpersonal relations were exhibited. Students behaved like members of an extended family assisting, supporting, and encouraging each other. Students were held accountable, as part of a larger group, and it was everyone’s task to make certain that each person in the group was successful. By promoting this academic community of learners, teachers responded to the students’ need for a sense of belonging, honored their human dignity, and promoted their individual self-concepts (Gay, 2000).

For the second research question, since teacher perception influences teacher efficacy and they both impact academic achievement, it would seem logical that school districts across the country would invest in professional development workshops to help teachers understand how their teacher perceptions impact student achievement.

Jawanza Kunjufu in his book, *Countering the Conspiracy to Destroy African American Boys*, suggests that one of the first steps in solving the achievement gap is to hire educators, particularly, African American male teachers, counselors, coaches, and principals, who are culturally similar to African American students. This rarely occurs. Data from the Equal Employment Opportunity Commission (EEOC) reveal that 83% of all elementary school teachers were females, and only 10% of these numbers were African Americans. African American males constituted only 1.2% of the total 17% of elementary teachers who were male.

Furthermore, 45.7% of all full-time secondary school teachers were female, and 54.3% were male. African American males accounted for 3.2% of that participation rate. Based on these figures, it could be concluded that a majority of African American males could spend their entire K-12 education and have very little interaction with an African American male teacher, counselor, or administrator (Kunjufu, 1995).

Kunjufu (1995) believes culturally different teachers and the lack of African American male educators have resulted in what he describes as the 4th grade failure syndrome for African American children:

Upon entering school in primary grades, African American children possess enthusiasm and eager interest; however, by fifth grade the liveliness and interest are gone, replaced by passivity and apathy. Primary grades present a more nurturing environment than intermediate or upper grades. In early childhood education much of the activity is child-teacher centered and child-child interactive. In primary grades African Americans progress and thrive at the same rate as their counterparts until the third grade syndrome. Morgan found that after the third grade, the achievement rate of African Americans began a downward spiral that tended to continue in the child's academic career. The classroom environment was transformed from a socially interactive style to a competitive, individualistic, and minimally socially interactive style of learning. (Morgan, 1990, pp. 49-54)

For the last research question, to help African American students master mathematical literacy, these students would likely benefit from hands-on, concrete and manipulative activities. Moses (1994) suggests that any new instruction in math has to replace the traditional, rote-bound instruction with imaginative activities that engage student creativity and encourage sophisticated mathematical reasoning.

Curriculum and Evaluation Standards for School Mathematics (National Council of Teachers of Mathematics, 1989), while not directly addressing cultural diversity issues, advocates instructional practices that include the use of manipulative materials, cooperative work, communication of mathematical ideas in everyday language and writing about mathematics. It would seem like a natural ‘fit’ that cultural diversity and mathematics join together to make mathematics truly a discipline for all students.

To do so, college and universities should consider incorporating in their math programs, an emphasis on more problem-solving, hands-on activities, interactive learning experiences, and alternative assessment. In addition, more professional development training for educators in the areas of cultural relevant teaching, cultural relevant pedagogy, and hands-on, learning experiences in mathematics is recommended.

Suggestions for Further Research

No single research can be expected to deal with all issues arising during the dissertation process. The following are some areas suggested for further research:

1. Examine if the ethnicity of the teacher impacts the academic achievement of students who have been shown to have high or low verve.
2. Examine if the verve level of the teacher impacts the academic achievement of students with high and low verve levels.
3. Determine if there is a difference in verve levels between males and females in elementary or high schools.
4. Examine if Mexican-American middle and high school students possess high or low verve levels.

Summary

This researcher has provided additional areas of concern that merit further inquiry into the subject of the achievement gap between African American and European American students. Other studies have focused on the achievement gap; however, this research's intent was to focus on if verve has any part to play in the current Academic Achievement Gap. This research discovered that African American middle school students have higher amounts of verve than their European American counterparts and that having higher verve levels affects their overall math scores. However, this research also found that having higher amounts of verve does not negatively impact student academic achievement in reading.

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APPENDIX A
PARENT'S CONSENT FORM

The Relationship Between Verve and the Academic Achievement of Junior High Students

This is to inform you that your child's school has been chosen to participate in a research study to look at student achievement. Your child has been chosen to participate because he/she is a junior high student and is between the ages of 11-15. A total of 500 students have been asked to participate in this study. If you agree to participate in this study, your child will be asked to complete one questionnaire during class time on school premises. The questionnaire will only take 10 minutes to complete.

The risks associated with this study are none. The benefits of this study are none. Students are free to refuse to participate or withdraw from the study at any time without any penalty.

The study is confidential. At no time will the identity of your child be revealed, and the questionnaire will be coded so that no names are attached to them. The records of this study will be kept private. No identifiers linking me to the study will be included in any sort of report that might be published. Research records will be stored securely and only Dr. Norvella Carter or Tory Hawkins will have access. My decision whether or not to participate will not affect my current or future relationship with Texas A&M University. If I decided to participate, I am free to refuse to answer any of the questions that make me feel uncomfortable.

This research study has been reviewed by the Institutional Review Board-Human Subjects in Research, Texas A&M University. For research-related problems or questions regarding subjects rights, I can contact the institutional review board through Dr. Michael W. Buckley, Director of Research Compliance, Office of Vice President for Research at (979) 845-8585 (mwbuckley@tamu.edu).

I have read the above information. I have asked questions and have received answers to my satisfaction. I have been given a copy of this document for my records. By signing, I give consent to participate.

Thank you for your cooperation.

Sincerely,

Tory Hawkins

Parent/Guardian _____
Child _____

Date _____
Date _____

APPENDIX B
SUBJECT ASSENT FORM

The Relationship Between Verve and Academic

Achievement of Junior High Students

I understand that this research project is going to look at school achievement. I understand that I have been asked to participate because I am a junior high student and I am 11-14 years old. I understand that my participation in this study will involve the completion of two questionnaires. I am aware that it will take me 15 minutes to complete the questionnaires.

I understand that I may refuse to participate or withdraw from the study at any time without any penalty. No information about me will be released with my consent, and all identifiable information will be protected.

I understand that I will not directly benefit from this research. I am aware, however, that this research will potentially help to a fuller understanding of academic achievement in junior high school students. This study is anonymous and the questionnaires will be coded so that no names are attached to them.

This research study has been reviewed by the Institutional Review Board - Human Subjects in Research, Texas A&M University. For research-related problems or questions regarding subjects rights, I can contact the institutional review Board through Dr. Michael W. Buckley, Director of Research Compliance, Office of Vice President for Research at (979) 845-8585 (mwibuckley@tamu.edu).

I have read the above information. I have asked questions and have received answers to my questions. I have been given a copy of this consent form for my records. By signing this document, I consent to participate in the study.

Signature:_____

Date:_____

Signature of Investigator:_____

Date:_____

APPENDIX C
TEACHER CONSENT FORM

Teacher Consent Form
The Relationship between Verve and the Academic achievement between African American and European American Middle school Students

I, as a middle school science teacher for Channelview ISD, have been asked to participate in a study that looks at the relationship between verve and academic achievement of African American and European American middle school students. This study is being conducted by Mr. Torrance Hawkins as part of his graduate coursework at Texas A&M University. I understand that there are approximately 5 teachers who have been asked to participate.

I understand that this research project is going to look at school achievement, age, ethnicity, gender, household income, and TAKS scores of middle school student's ages 13-15 years old. I understand that I have been asked to participate because I am a junior high science teacher. My participation will involve distributing and collecting parental permission and student assent forms and administering a survey to those who have agreed to participate. I am aware that it will take approximately 15 minutes to administer the questionnaire. Students who do not wish to participate will continue to do their normal classroom activities during this time.

I understand that I may refuse to participate or withdraw from the study at any time. My participation is voluntary. There are no risks in participating. I understand that there are no benefits from participation. Whether or not I agree to participate will have no effect on my job or relationships status with the school or Channelview ISD. No information about me will be released without my consent. All identifiable information will be protected. The TAKS scores I will provide to the students are confidential; however, the questionnaires will not have any identification on them.

If I have any questions about this study, I may contact Mr. Torrance Hawkins at 15500 Proctor, Channelview, Texas 77530. His telephone number is 281-452-8083 and his email address is tory_hawkins@hotmail.com. I may also reach his advisor, Dr. Norvella Carter at 979-862-7952 or by email at ncarter@tamu.edu.

This research study has been reviewed and approved by the Institutional Review Board-Human Subjects in Research, Texas A&M University. For research-related problems or questions regarding subject rights, the Institutional Review Board may be contacted through Dr. Michael W. Buckley, Director of Research Compliance, Office of the Vice President for Research at 979-845-8585 (mwibuckley@tamu.edu).

I have read the above information. I have asked questions and received answers to my satisfaction. I have been given a copy of this consent form. I understand that by signing this document, I am voluntarily giving consent to participate in this study.

Signature

Date

Printed Name

Signature of Investigator

Date

APPENDIX D
BACKGROUND QUESTIONNAIRE

Background Questionnaire

Circle the response that applies to you.

1. Age- 11, 12, 13, 14, 15
2. Ethnicity- European American, African American, Hispanic, Asian
3. Gender- Male Female
4. Average Household Income per Year.

\$0- \$10,000	\$10,000- \$15,000	\$15,000- \$20,000
\$20,000- \$25,000	\$30,000 or above	

Child Activity Questionnaire

Directions: Please listen carefully as each question is read aloud. Answer each question based on how you feel and how often you like to do these activities. There are no right or wrong answers. Just be honest and choose the answer that's best for you.

Circle only one answer for each question.

5. How often do you prefer for your body to be moving?

1	2	3	4	5
Almost Never	Not Much	Sometimes	Quite A Lot	Almost Always
6. How often do you feel that a party must have music or it's not really a party?

1	2	3	4	5
Almost Never	Not Much	Sometimes	Quite A Lot	Almost Always

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7. How often do you need music in your life?

1	2	3	4	5
Almost Never	Not Much	Sometimes	Quite A Lot	Almost Always

8. How often do you move your body when you talk?

1	2	3	4	5
Almost Never	Not Much	Sometimes	Quite A Lot	Almost Always

9. How often does good music put you in a good mood?

1	2	3	4	5
Almost Never	Not Much	Sometimes	Quite A Lot	Almost Always

10. How often do you feel that one should not sit still when he or she is listening to music.

1	2	3	4	5
Almost Never	Not Much	Sometimes	Quite A Lot	Almost Always

11. How often are drum beats essential for enjoyable music.

1	2	3	4	5
Almost Never	Not Much	Sometimes	Quite A Lot	Almost Always

12. How often are there many ways that you move your body?

1	2	3	4	5
Almost Never	Not Much	Sometimes	Quite A Lot	Almost Always

Permission granted by Boykin & Mungai July 25, 2003

13. How often do you move while watching TV?

1	2	3	4	5
Almost Never	Not Much	Sometimes	Quite A Lot	Almost Always

14. How often do you feel happier when music is on?

1	2	3	4	5
Almost Never	Not Much	Sometimes	Quite A Lot	Almost Always

15. How often do you like to clap and tap your feet when music is on?

1	2	3	4	5
Almost Never	Not Much	Sometimes	Quite A Lot	Almost Always

16. How often do you have to dance when you listen to music?

1	2	3	4	5
Almost Never	Not Much	Sometimes	Quite A Lot	Almost Always

17. How often do you prefer to sing aloud to music rather than sit and listen quietly?

1	2	3	4	5
Almost Never	Not Much	Sometimes	Quite A Lot	Almost Always

18. How often do you use your hands and body when you speak?

1	2	3	4	5
Almost Never	Not Much	Sometimes	Quite A Lot	Almost Always

Permission granted by Boykin & Mungai, July 25, 2003

VITA

Torrance N. Hawkins
2214 Whirlaway
Stafford, Texas 77477

EDUCATION

2005	Doctor of Philosophy, Curriculum and Instruction Texas A&M University, College Station, Texas
1996	Master of Education, Counseling and Guidance Prairie View A&M University, Prairie View, Texas
1995	Bachelor of Arts, Social Work Prairie View A&M University, Prairie View, Texas

PROFESSIONAL EXPERIENCE

3/00-Present	Lead Counselor, Channelview Independent School District Channelview, Texas
1/96-2/00	Science Teacher, Aldine Independent School District Houston, Texas

PRESENTATIONS

American Association of Colleges for Teacher Education's (AACTE) 55th Annual Meeting, My Journey to Become a Teacher Educator, January 24-27, 2003

Recruitment Coordinator for the National Invitational Conference for Educational Research in the Urban South, 2002

Understanding Underserved Students: The Bearing School, Houston, Texas, 2001

This dissertation was typed and edited by Marilyn M. Oliva at Action Ink, Inc.